

ENGINEERING REPORT

for

CONTRACT NUMBER DACW-33-83-D-0006
WORK ORDER NUMBER 0010

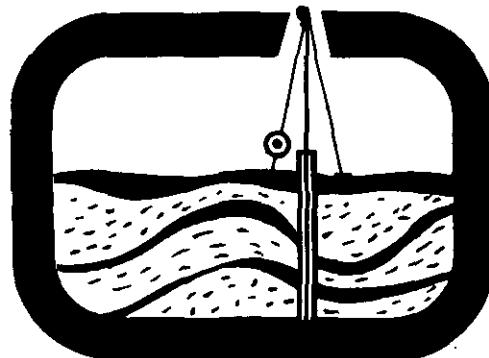
SUBSURFACE INVESTIGATION

PINE POINT HARBOR
SCARBOROUGH, MAINE

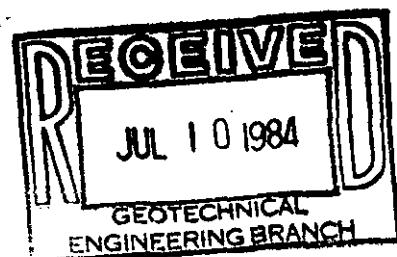
July 3, 1984

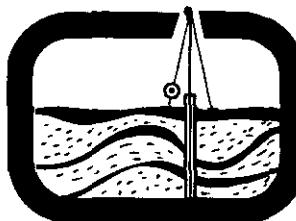
Prepared for:

U.S. Army Corps of Engineers
New England Division
424 Trapelo Road
Waltham, Massachusetts 02254



EGA





EGA
EASTERN GEOTECHNICAL ASSOCIATES • BRIGGS

164 Washington Street, Norwell, MA 02061 ► Telephone (617) 773-1744

July 3, 1984

Mr. Joe B. Fryar, P.E.
Chief - Engineering Division
New England Division
U.S. Army Corps of Engineers
424 Trapelo Road
Waltham, Massachusetts 02254

RE: Contract DACW-33-83-C-0006
Work Order No. 0010

Dear Mr. Fryar:

In accordance with Work Order No. 0010, dated 2 May 1984, we enclose one copy of our Engineering Report for the subsurface investigation performed at Pine Point Harbor, Scarborough, Maine for proposed anchorages. Two additional copies have been delivered under separate cover to your Geotechnical Engineering Branch.

If you have any questions or comments, please do not hesitate to call.

Very truly yours,



David S. Campbell, P.E.
President

DSC/rb
Attachments

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1.0 GENERAL

1.1 Authorization

The work reported herein was performed under Contract DACW 33-81-D-0006, Work Order Number 0010, dated 2 May 1984. The authority for this project was derived from Section 107, Small Boat Navigation Project.

1.2 Project Site

The site is located in Pine Point Harbor, Scarborough, Maine.

1.3 Purpose

The purpose of this work was to determine the subsurface conditions for the proposed anchorage in Pine Point Harbor, Scarborough, Maine.

1.4 Scope of the Investigation

Inspection and exploration instructions, which were provided by the Army Corps of Engineers, New England Division, are included in Appendix A. The subsurface investigation program employed continuous drive sample borings and machine probes.

Work under this delivery order consisted of locating two drive sample borings and seventeen machine probes by means of ranges and sextant at locations as shown on Figure 1. Elevations were to be estimated from daily tide curves using mean low water (MLW) as the datum.

The drive sample borings were performed in accordance with paragraph "7" page C-11 of the specifications using a solid-barrel sampler with sampling intervals of 5 ft. The borings were taken to the specified depth of 15 ft or refusal. Where refusal was encountered, rock was to be cored a minimum of three feet. The field logs for the test borings are included as Appendix D. The machine probes were performed in accordance with paragraph "8c. (3)" page C-14 of the specifications using "AW" size drill rods. Probes were driven to the specified depth of -10 ft MLW or refusal. The field logs for the probes are included as Appendix E.

2.0 QUALITY CONTROL

2.1 Equipment

The following equipment and tools were used to perform the work:

- a. Drilling Platform: A 16 by 12 ft wooden raft was used as the drilling platform. The raft was moved by a 16 ft Boston Whaler, powered by a one hundred horsepower Johnson outboard motor.
- b. Core Drill: The core drill used was a modern hydraulically driven rotary head unit manufactured by Acker Drill Company.
- c. Drive Hammer: The drive hammer used to advance the solid-barrel sampler and drill rods for probes weighed approximately 300 pounds.
- d. Casing and Rods: NW (3-0 in. I.D.) flush joint casing was used to keep the borehole open. AW-size drill rods were used in washing out the borehole and driving the solid-barrel sampler and AW drill rods for probes.
- e. Samplers: The equipment employed to obtain soil samples was a solid-barrel sampler 5.0 ft in length with an inside diameter of 1-7/8 in. Rock cores were obtained by a swivel head, double tube, 2-3/16 in. I.D. core barrel using an impregnated diamond bit.

2.2 Records

NED Forms 121, 58 and 58A were used to record pertinent drilling and sampling operations. The boring and probe logs include the following information:

- (1) Name of project.
- (2) Site location designation.
- (3) Ground elevation at location of exploration.
- (4) Date exploration performed.
- (5) Method of penetration.
- (6) Depth of penetration.

- (7) Density of material encountered, determined by sound and performance of probing operation.
- (8) Name of driller and Field Inspector.
- (9) Blows/foot or blows/six inches of penetration.

The test boring logs contained the following information:

- (1) Hole number, hole designation and elevation of top of hole.
- (2) Make and manufacturer's model designation of equipment.
- (3) Type of drilling and sampling operation by depth.
- (4) Dates and time by depth when drilling and sampling operations were performed.
- (5) Depths at which samples or cores were recovered or attempts made to sample including top and bottom depths of each sampling interval. Classification or description including geologic and common usage designation such as till, fluvial deposits, etc. by depths of materials sampled or penetrated including a description of moisture conditions, color and conditions of compactness or stiffness of soils materials encountered. Record of penetration resistance such as drive hammer blows given in blows per six inches of penetration depth for driving sample spoons.
- (6) Depths at which drill water is lost and regained.
- (7) Depth to bottom of hole.
- (8) Percentage of sample of core recovered per run.

2.3 Procedures

- a. Boreholes were advanced by sampling in which a 1-7/8 inch I.D. by 5.0 foot solid-barrel sampler was advanced from the ground surface or below the bottom of the casing into undisturbed soil by the impact of a hammer weighing approximately 300 pounds, falling 18 inches. Refusal was defined as 100 blows with no penetration or bouncing refusal.

- b. The sample spoon shoes were kept reasonably sharp at all times. Dull, bent, or otherwise damaged samplers were not used. Following sampling, the casing was advanced and cleaned out using an appropriately sized side discharging chopping bit or roller rock bit.
- c. Samples were classified in the field immediately following the taking of the sample. Classification was in accordance with ASTM D-2487 and D-2488. Representative samples were taken from each soil sampling run and placed in 16 oz. glass jars with hermetically sealed lids. Jars were labeled with sample number, sampling interval, boring number, date, location, and soil description. A chain of custody log was maintained documenting custody of the samples between the field and transportation and delivery to the laboratory at NED.
- d. The machine probes were made by advancing an open-end AW drill rod from the mudline to the specified depth or refusal by the impact of a 300 pound hammer falling freely through an 18 inch drop, recording the blows per foot of penetration. Refusal is defined as 100 blows with no penetration or bouncing refusal.
- e. The location of each test boring and probe was established by turning two angles between control points established on shore using a sextant.

3.0 QUALITY ASSURANCE CERTIFICATION

I hereby certify that the above-mentioned records, equipment, and procedures were used to perform the subsurface exploration described herein. I also certify that the work was performed in a professional manner and meets the requirements set forth in the work order.

CERTIFIED 22 May 1984



David S. Campbell

TABLE 1
SUMMARY OF ACTIVITIES

DATE	ACTIVITY
5 May	Friday: Mobilized drilling equipment to Scarborough, Maine. Made arrangements to launch raft using a crane provided by Badger Rand Company, Inc., Portsmouth, New Hampshire on 7 May 1984.
7 May	Monday: Assembled raft and launched raft and boat. Started necessary survey work to establish ranges for use in locating borings and probes by sextant.
8 May	Tuesday: Survey work completed and drilling was started at probe location P-2. Completed probe FP-84-1 and boring FD-84-1. Heavy rain stopped work at 1430 hrs.
9 May	Wednesday: Raft and boat caught in rip tide. Raft went aground in attempt to navigate around rough water by staying close to shore. Raft stranded for 3-1/2 hrs. Buoys were set at probe locations while raft was grounded. Started and completed 6 probes, FP-84-2 thru FP-84-7.
10 May	Thursday: Completed probes FP-84-8 thru FP-84-11. Low tide prevented additional probes from being accomplished.
11 May	Friday: Completed boring FD-84-3 and probes FP-84-12 thru FP-84-17. Low tide prevented access to boring location B-1.
14 May	Monday: Started boring B-1, FD-84-2. Heavy rain prevented the completion of the boring.
15 May	Tuesday: Electrical problems with outboard motor were repaired and boring B-1, FD-84-2 was completed.
16 May	Wednesday: Demobilized drilling equipment and raft. Field work for Pine Point Harbor was completed.

APPENDIX A
INSPECTION AND EXPLORATION INSTRUCTIONS

ATTACHMENT NO. 1

GEB REQUISITION NO. 84-43 - DACW 33-83-D-0006

DELIVERY ORDER No. 0010

INSPECTION AND EXPLORATION INSTRUCTIONS

PROJECT: Section 107, Small Boat Navigation Project

SITE: Pine Point Harbor, Scarborough, ME

PURPOSE: The subsurface investigations are to determine the foundation conditions for the proposed anchorage in Pine Point Harbor, Scarborough, ME.

1. SCOPE OF INVESTIGATION

a. Locate two continuous 300# cased drive sample borings and up to twenty-four (24) 300# machine probes by means of ranges and sextant for the locations as indicated on Attachment No. 2. Front ranges shall be located along base line and rear ranges along the offset line which shall be a minimum of 150 feet away from base line. Two angles shall be used for each location. One angle shall be taken from corner of building (Sta 0+00 on baseline) to the ranges and the other from red daymaker to the ranges. Optional probes will be determined by Mr. Blair after completion of all proposed probes. Elevations will be estimated based on daily tide curves. Mean low water (MLW) will be the datum used on all boring logs and throughout the engineering report.

b. Up to twenty-four (24) machine probes shall be driven to an elevation of up to -10 MLW or refusal in accordance with paragraph 8c. (3) page C-14 of the specifications and shall be performed using "A" size rods. Optional probes shall be determined by Mr. Blair after completion of all proposed probes.

c. The two continuous drive sample borings shall be driven to a depth of 15 feet or refusal. The sampling work shall be in accordance with paragraph 7, page C-11 of the specifications. Water content jar samples shall be taken in all fine grain soil which exhibits any plasticity. Where refusal is encountered, 3 feet of rock core will be drilled terminating the work at this location.

d. A geotechnical inspector shall act as field inspector while performing the borings and probes. The inspector shall provide telephone reports to Mr. Blair, Corps of Engineers, at 617-647-8396 at least every two working days and upon completion of all proposed probes.

e. All samples shall be delivered to the Corps of Engineers Headquarters in Waltham, Massachusetts by the field inspector. Sample delivery shall be coordinated with the Director, NED Materials and Water Quality Laboratory at 617-647-8367/8392.

2. SITE CONDITIONS

The proposed exploration program is in Pine Point Harbor, Scarborough, ME. All of proposed explorations are within the tidal range. It is anticipated that water depths at the exploration site range from 0 to 15 feet. The boring program shall be organized such that explorations in high areas are accomplished during high tides to avoid delay in the program.

3. RIGHTS OF ENTRY

The Contractor is responsible for securing any rights of entry, approvals, permits, etc. necessary for the performance of the work.

4. COORDINATION

Mr. James Blair, Corps of Engineers, 617-647-8396, shall be contacted five days prior to start of work and at least every two working days, completion of all proposed probes or at the completion of each boring whichever is more frequent by the geotechnical inspector to report on how work is progressing and what types of materials are being encountered.

5. EXPLORATION NUMBERS

The machine probes designated P-1 through P-24 and located on Attachment 2 shall be numbered FP-84-1 through FP-84-24 in order of their completion. The drive sampling borings designated B-1 through B-2 and located on Attachment 2 shall be numbered FD-84-1 and FD-84-2 in order of their completion. The new numbers shall be indicated on the exploration logs and shown on a plan of explorations.

6. GOVERNMENT REVIEW

The Government will review the draft submittal as well as the completed work. Subsequent to such review, the Contractor shall accomplish any corrections which may be directed as the result of the Government review.

7. COMPLETION SCHEDULE

Services under this delivery order shall start within 15 calendar days after receipt of delivery order. Duration of field work is estimated to be six work days. The geotechnical report shall be submitted in draft format for review by the Government, post-marked no later than seven calendar days after completion of the field work. Government review will take approximately ten calendar days from receipt of draft report. The final geotechnical report shall be submitted post-marked no later than seven calendar days after receipt of draft report including the action taken on possible Government comments.

APPENDIX B

SAFETY REPORTS

EASTERN GEOTECHNICAL ASSOCIATES

WEEKLY SAFETY MEETING

TO: Safety Office, NED

FROM: Field Engineer

Date held 5-4-84

THRU: Project Engineer

Time 0600

Weekly safety meeting was held this date for the following personnel:
Contract No. DACW 33-83-D-0006 Personnel present: C. Reil
Work Order No. 0010 C. Coolen
Conducted By: Ronald Bukoski

1. Subjects discussed (Note, delete, or add):

- Individual Protective Equipment -
- Prevention of Falls -
- Safe Lifting Techniques -
- Emergency Communications -
- Fire Prevention -
- Sanitation, First Aid -
- Tripping Hazards - trash, hose, nails in lumber -
- Staging, Ladders, Concrete Forms -
- Hand Tools -
- Portable Power Tools -
- Woodworking Machinery -
- X Equipment Maintenance (Zero defects) -
- Hoisting Equipment -
- Ropes, Hooks, Chains and Slings -
- Electrical Grounding, Temporary Wiring -
- Lockouts for safe clearance procedures -
- Electrical, pressure, moving parts -
- Welding -
- Excavations -
- Loose Rock and Steep Slopes -
- Explosives -
- X Water Safety -
- X Other - Driving Safety

Prepared by: Ronald Bukoski
Field Engineer

2. Exposure:

No previous exposure, start of new work order.

Signature:

Ronald J. Bukoski
Project Engineer

3. Forwarded: NED, Waltham, MA

EASTERN GEOTECHNICAL ASSOCIATES

WEEKLY SAFETY MEETING

TO: Safety Office, NED

FROM: Field Engineer

Date held 5-7-84

THRU: Project Engineer

Time 0700

Weekly safety meeting was held this date for the following personnel:
Contract No. DACW 33-83-D-0006 Personnel present: C. Reil
Work Order No. 0010 C. Coolen
Conducted By: John Crowther B. Smith

1. Subjects discussed (Note, delete, or add):

- Individual Protective Equipment -
Prevention of Falls -
Safe Lifting Techniques -
Emergency Communications -
Fire Prevention -
Sanitation, First Aid -
Tripping Hazards - trash, hose, nails in lumber -
Staging, Ladders, Concrete Forms -
Hand Tools -
Portable Power Tools -
Woodworking Machinery -
Equipment Maintenance (Zero defects) -
- Hoisting Equipment -
- Ropes, Hooks, Chains and Slings -
Electrical Grounding, Temporary Wiring -
Lockouts for safe clearance procedures -
Electrical, pressure, moving parts -
Welding -
Excavations -
Loose Rock and Steep Slopes -
Explosives -
- Water Safety -
Other -

Prepared by: John Crowther
Field Engineer

2. Exposure:

For May 4, 1984, covering two men, for a total exposure of 20
manhours.

Signature:

Ronald J. Balash
Project Engineer

3. Forwarded: NED, Waltham, MA

EASTERN GEOTECHNICAL ASSOCIATES

WEEKLY SAFETY MEETING

TO: Safety Office, NED

FROM: Field Engineer

Date held 5-14-84

THRU: Project Engineer

Time 0700

Weekly safety meeting was held this date for the following personnel:
Contract No. DACW 33-83-D-0006 Personnel present: C. Reil
Work Order No. 0010 C. Coolen
Conducted By: John Crowther

1. Subjects discussed (Note, delete, or add):

- Individual Protective Equipment -
- Prevention of Falls -
- Safe Lifting Techniques -
- Emergency Communications -
- X Fire Prevention -
- Sanitation, First Aid -
- X Tripping Hazards - trash, hose, nails in lumber -
- Staging, Ladders, Concrete Forms -
- Hand Tools -
- Portable Power Tools -
- Woodworking Machinery -
- Equipment Maintenance (Zero defects) -
- Hoisting Equipment -
- X Ropes, Hooks, Chains and Slings -
- Electrical Grounding, Temporary Wiring -
- Lockouts for safe clearance procedures -
- Electrical, pressure, moving parts -
- Welding -
- Excavations -
- Loose Rock and Steep Slopes -
- Explosives -
- Water Safety -
- Other -

Prepared by: John Crowther
Field Engineer

2. Exposure:

For May 7 thru May 12, 1984, covering three men, for a total exposure of 110 manhours.

Signature: Donald J. Ruberti
Project Engineer

3. Forwarded: NED, Waltham, MA

EASTERN GEOTECHNICAL ASSOCIATES

WEEKLY SAFETY MEETING

TO: Safety Office, NED

FROM: Field Engineer

Date held 5-17-84

THRU: Project Engineer

Time _____

Weekly safety meeting was held this date for the following personnel:
Contract No. DACW 33-83-D-0006 Personnel present: _____
Work Order No. 0010 _____
Conducted By: _____

1. Subjects discussed (Note, delete, or add):

Individual Protective Equipment -
Prevention of Falls -
Safe Lifting Techniques -
Emergency Communications -
Fire Prevention -
Sanitation, First Aid -
Tripping Hazards - trash, hose, nails in lumber -
Staging, Ladders, Concrete Forms -
Hand Tools -
Portable Power Tools -
Woodworking Machinery -
Equipment Maintenance (Zero defects) -
Hoisting Equipment -
Ropes, Hooks, Chains and Slings -
Electrical Grounding, Temporary Wiring -
Lockouts for safe clearance procedures -
Electrical, pressure, moving parts -
Welding -
Excavations -
Loose Rock and Steep Slopes -
Explosives -
Water Safety -
Other -

Prepared by: _____
Field Engineer

2. Exposure:

For May 14 thru May 16, 1984, covering three men, for a total exposure of 40 manhours. Field work for Work Order No. 0010 was completed on May 16, 1984.

Signature: Ronald F. Babak
Project Engineer

3. Forwarded: NED, Waltham, MA

APPENDIX C
CHAIN OF CUSTODY LOG

EASTERN GEOTECHNICAL ASSOCIATES

Chain of Custody Log

Project: Subsurface Investigation: Pine Point Harbor
Contract DACW-33-83-D-0006, WO 10

Items: Jar Samples 5

Bottles _____

Core Boxes 1

Sampling Logs FD-84-1, FD-84-2

Date & Time Received Date & Time Transferred Comments Condition

1.	<u>as sampled</u>	<u>5-17-84</u>	<u>10:00</u>	<u>Steve Marks</u>
2.				<u>Chris Turek</u>
3.		<u>5-17-84</u>	<u>12:30</u>	
4.				
5.				

APPENDIX D
FIELD LOGS OF TEST BORINGS

CORPS OF ENGINEERS, U. S. ARMY
NEW ENGLAND DIVISION
FOUNDATION AND MATERIALS BRANCH
FIELD LOG OF TEST BORING

Site Pine Pt. Harbor ME.

PROJECT NO. 0010

Page 1 of 4 Pages

Hole No. FD-84-1 Diam. (Casing) 3"

Boring Started 5-8-84

Co-ordinates: N _____ E _____

Boring Completed 5-8-84

Drilled by EASTERN GEOTECHNICAL ASSOC.

Report Submitted _____

Purpose of Exploration DREDGE SITE

Elevation Top of Hole -9.05 M.L.W. M.S.T.

Casing Left In Place _____ Feet

Total Overburden Drilled 3.0 Feet

Elevation Top of Rock -14.05 M.L.W. M.S.T.

Elevation Bottom of Hole -17.05 M.L.W. M.S.T.

Total Rock Drilled 3.0 Feet

Total Depth of Hole 8.0 Feet

Core Recovered 7.6 %

Core Recovered 2.3 Ft.; Diam. 2.1 in.

Soil Samples 17.8 in. Diam. 2 No.

Soil Samples _____ in. Diam. _____ No.

Water Table Depth _____

Depth From	To	Method of Drilling and Type of Bit Used
0.0	4.75	SAMPLED WITH 5FT. X 7/8" IP.
		SOLID SPOON SAMPLER FROM 0.0
	TO 4.75 FT.	CASED TO 5.0 FT.
5.0	8.0	WASHED OUT AND CORED WITH NX DIAMOND SIZE BIT + BARREL TO 8.0 FT.

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Ground Water _____ Back of Page _____
Boring Location Sketch _____ Back of Page _____
Overburden Record _____ Page _____
Rock Drilling _____ Page _____
_____ Page _____
_____ Page _____
_____ Page _____

Prepared by John Cronther
Field Data

Lab. Data

Submitted by _____

U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

Site Pine Pt. Harbor ME. Page 2 of 4 Pages

Boring No FD-84-1 Desig. B-2 Diam. (Casing) _____

FIELD LOG OF TEST BORING

Co-ordinates: N _____ E _____

Elevation Top of Boring	-9.05	MLW	Hammer Wt. 300 lbs	Boring Started 5-8-84
Total Overburden Drilled	5.0	M.S.L.	Hammer Drop 18"	Boring Completed 5-8-84
Elevation Top of Rock	-14.05	M.S.L.	Casing Left -	
Total Rock Drilled	3.0	Feet	Subsurface Water Data:	Page _____
Elevation Bottom of Boring	-17.05	MLW	Obs. Well -	
Total Depth of Boring	8.0	Feet	Drilled By EASTERN GEOTECHNICAL ASSOC.	
Core Recovered	76 %	No. Boxes 1	Mfg. Des. Drill ACKER	
Core Recovered	2.3 ft	Diam. 2.1 in.	Inspected By: J. Cawthon	
Soil Samples	1 7/8"	In. Diam. 2 No.	Classification By: J. Cawthon	
Soil Samples		In. Diam. No.	Classification By:	

DEPTH CASING BLOWS 1" = 10	CORE/SAMPLE		BLOWS PER 6" CORE RECVY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
	NO.	SIZE DEPTH RANGE			
0.00					
1.00	1		2	SAMPLED WITH SFT. X 1 7/8" ID. SPOON FROM 0.0 TO 4.75 FT. WITH 300 lb HAMMER	SILTY SAND Fine sand, 10-15% non plastic fines, trace shells, dark grey (SM) NOTE: ODOR
4.00			7		
4.75			8		
5.00			8		
5.00			9		
5.00			12	DROVE 3 INCH I.D. CASING FROM 0.0 TO 5.0 FT. WITH 300 lb HAMMER AND WASHED OUT.	3.0
5.00	1A		13		SILTY SAND coarse to fine, mostly fine, 5-10% gravel, 10-15% non plastic fines, grey (SM)
5.00			15		
5.00			20	25" REC. BOUNCE AT 4.75 FT;	Poss. GLACIAL TILL
5.00			20		4.75 FT

GENERAL REMARKS: WATER 9.75 FT. DEEP AT
1008 hrs ON 5-8-84

Site: Pine Pt. Harbor ME.

Boring No.

FD-84-1

Page 3
of 4

DEPTH	CORE/SAMPLE		BLOWS PER FT.	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
ft. 2.0	NO.	SIZE DEPTH RANGE	CORE REC'D.		
5.0		7.0		CORED FROM 5.0 TO 8.0 FT. WITH "NX" CORE BARREL.	<u>Phyllite</u>
6.0	1	NX	27.5"		Dense, grey, siltin fractures in 3 ft. Drilled.
7.0			REC'D.	DRILL TIME = 1hr 52min	Note: foliation more noticeable on exposed outcrops
8.0				RECOVERY = 27.5" = 76%	
8.0		8.0		RQD = 47	8.0 FT.
				END OF BORING AT 8.0 FT.	
					NOTE: BEDROCK OUT- CROP 60 FT. TO THE NORTH EAST + Shows as + 1.0 on soundings plan

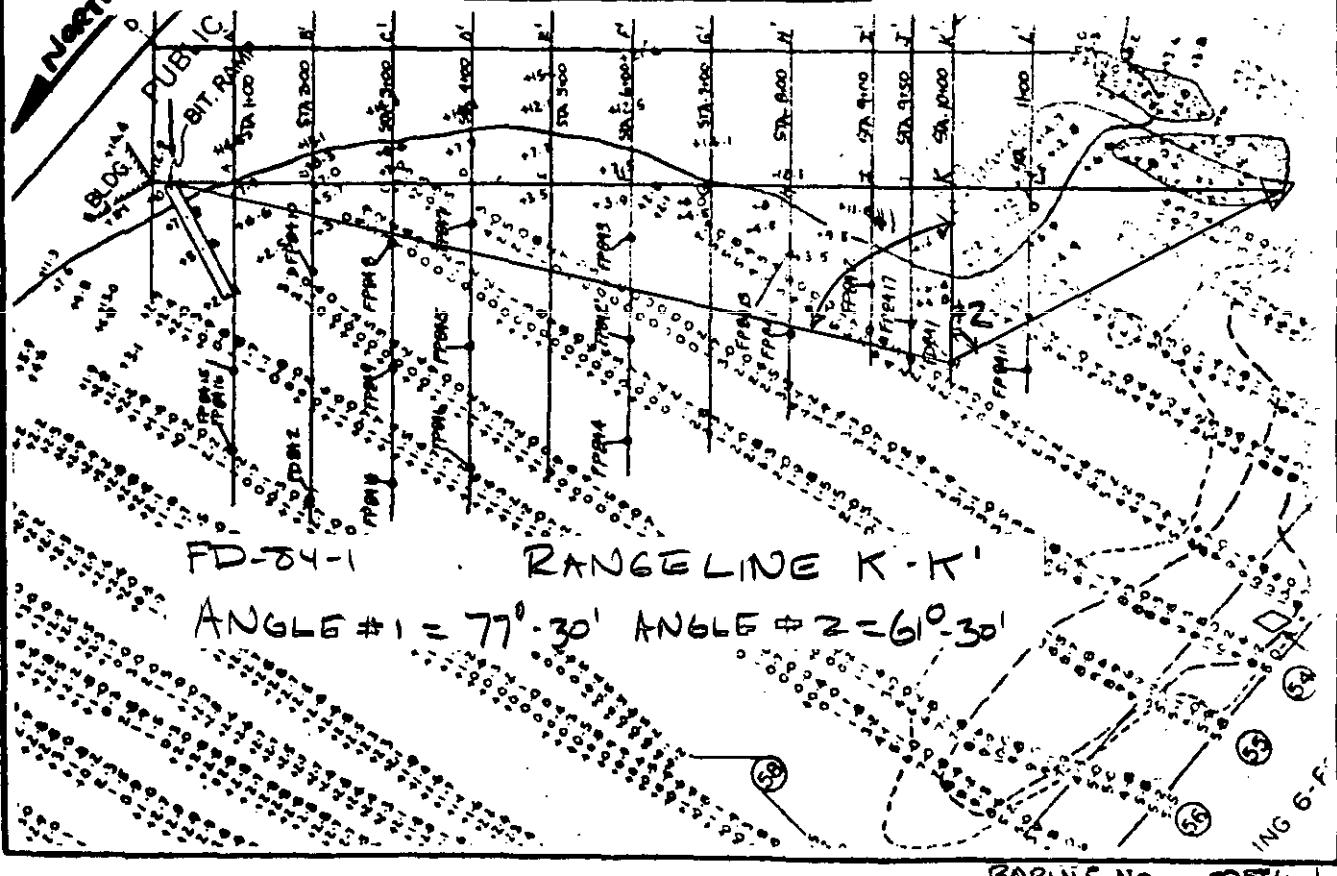
Site: PINE POINT ME

BORING NO. FD-84-1

TIDAL OBSERVATIONS

Note: Depths are in feet below original ground or mudline.

Probe Location Sketch



**CORPS OF ENGINEERS, U. S. ARMY
NEW ENGLAND DIVISION
FOUNDATION AND MATERIALS BRANCH
FIELD LOG OF TEST BORING**

Site Pine Point Harbor ME. PROJECT NO. 0010
Page 1 of 5 Pages

Hole No. FD-84-2 Diam. (Casing) 3"

Page 1 of 5 Pages

Co-ordinates: N _____ E _____

Boring Started 5-14-84

Drilled by EASTERN GEOTECHNICAL ASSOC.

Boring Completed. 5-15-84

Purpose of Exploration DREDGE SITE

Report Submitted

Elevation Top of Hole 0.8 MLW M.S.L.

Casing Left in Place _____ Foot

Total Overburden Drilled 15 Feet

Elevation Top of Rock _____ M.S.L.

Elevation Bottom of Hole - 14.2 M.S.L.

Total Rock Drilled _____ Feet

Total Depth of Hole 150 Feet

Cores Recovered _____ %

Core Recovered ____ Ft.; ____ Diam. ____ In.

Soil Samples 178 In. Diam. 3 No.

Soil Samples _____ In. Diam. ____ No. ____

Water Table Depth _____

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Prepared by JOHN CROWTHER
Field Data

Submitted by

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U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

Site Pine Point Harbor ME. Page 2 of 5 Pages

Boring No. FD-842 Design. B-1 Diam. (Casing) 3"

FIELD LOG OF TEST BORING

Co-ordinates: N _____ E _____

Elevation Top of Boring 0.8 M.S.L. Hammer Wt. 300 lbs. Boring Started 5-14-84
 Total Overburden Drilled 15 Feet Hammer Drop 18" Boring Completed 5-15-84
 Elevation Top of Rock _____ M.S.L. Casing Left _____
 Total Rock Drilled _____ Feet Subsurface Water Data _____ Page _____
 Elevation Bottom of Boring -14.2 M.S.L. Obs. Well _____
 Total Depth of Boring 15 Feet Drilled By EASTERN GEOTECHNICAL INC.
 Core Recovered % No. Boxes _____ Mfg. Des. Drill ACKER
 Core Recovered Ft. Diam. In. Inspected By: J. Groat
 Soil Samples 17/8 In. Diam. 3 No. Classification By: J. Groat
 Soil Samples In. Diam. No. Classification By:

DEPTH CASING BLOWS 1" = 1.0	CORE/SAMPLE			SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
	NO.	SIZE	DEPTH RANGE		
300lb HAMMER PER FOOT			0.0	1.75 FT. SINK IN WITH WEIGHT OF HAMMER.	
1.0	1	1 7/8		SAMPLED WITH 5 FT. X 17/8" ID. SPOON FROM 0.0 TO 5.0 WITH 300 LB HAMMER	SAND Fine 3-10% non plastic fines, trace shells organics + med. sand, grey + brown (SP-SM)
2.0FT SINK IN W WEIGHT OF HAMMER			3		
3.0			5		
4.0			6	DROVE 3" ID CASING FROM 0.0 TO 5.0 FT.	
5.0			4	WITH 300 LB HAMMER AND WASHED.	
6			2		
13			5.0	16 REC.	
14					
50					

GENERAL REMARKS WATER 5.6 FT. DEEP AT
0950 hrs ON 5-15-84

Site: Pine Point Harbor

Boring No.

FD-84-2

Page 3
of 5

DEPTH ft. 1/0	CORE/SAMPLE		BLOWS PER 6"	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
	NO.	SIZE INCHES RANGE			
6	2		3	SAMPLED WITH 5 FT. X 17/8" ID. SPOON FROM 5.0 TO 10.0 FT. WITH 300lb. HAMMER.	
6.0			4		
16			4		
7.0			6		
15			3		
8.0			3		
18			5		
9.0			6	DOVE 3" ID. CASING FROM 5.0 TO 10.0 FT. WITH 300 lb HAMMER AND WASHED.	
22			9		
10.0			8	12" REC.	
10.0	3		6		
11.0			9	SAMPLED WITH 5 FT. X 17/8" ID. SPOON FROM	
12.0			8	10.0 TO 15.0 FT. WITH 300 lb. HAMMER.	
13.0			6		
14.0			4		
15.0			4		
16.0			4		

Site: Pine Point Harbor, ME					Boring No. FD-84-2	Page <u>4</u> of <u>5</u>
DEPTH ft. 2.0	CORE/SAMPLE NO. SIZE		DEPTH PER 6"	BLOW CORE RECVY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
				4		
				5		
4.0						
5.0						
15.0	4				3" REC.	15.0
					END OF BORING AT 15.0 FT.	

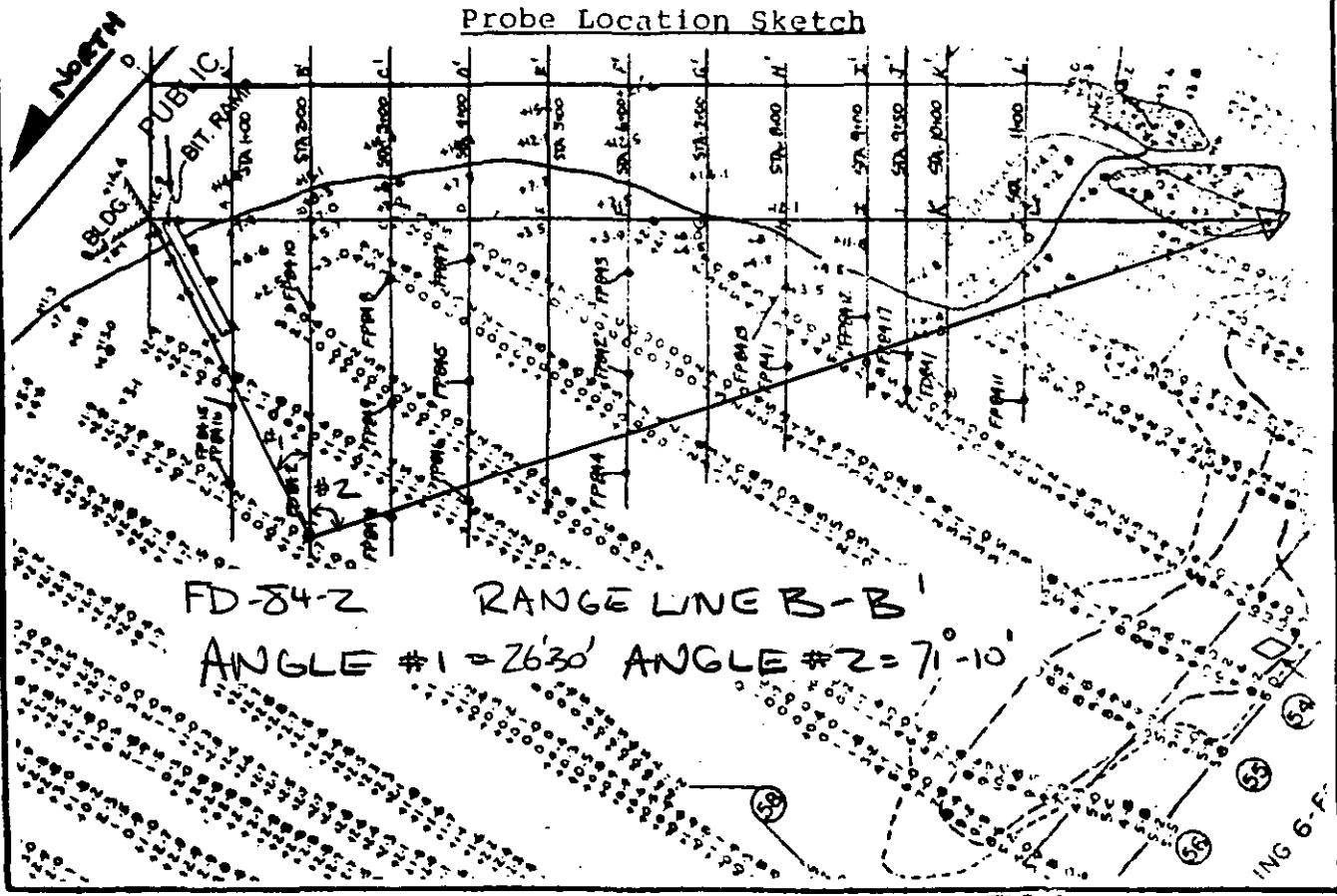
Site: PINEPOINT ME

BORING NO. FD-84-2

TIDAL OBSERVATIONS

Note: Depths are in feet below original ground or mudline.

Probe Location Sketch



FD-84-Z RANGE LINE B-B

ANGLE #1 = 26°30' ANGLE #2 = 71°10'

BORING: NO. ED-84-2

APPENDIX E
FIELD LOGS OF PROBES

Probe FP-84-1 Desig. P-20 Diam. (Casing) _____

FIELD LOG OF TEST PROBE

Co-ordinates: N _____ E _____

Elevation Top	-5.1	MLW	Hammer Wt. <u>300 lbs.</u>	Started <u>5-8-84</u>
Total Overburden Drilled	<u>8.0</u>	M.S.L.	Hammer Drop <u>17"</u>	Completed <u>5-8-84</u>
Elevation Top of Rock	-	M.S.L.	Casing Left	_____
Total Rock Drilled	N/A	Feet	Subsurface Water Data	Page _____
Elevation Bottom	-11.1	MLW	Obs. Well	_____
Total Depth	<u>8.0</u>	M.S.L.	Drilled By <u>EASTERN GEOTECHNICAL ASSOC.</u>	_____
Core Recovered	N/A	%	Mfg. Date Drill <u>ACKER</u>	_____
Core Recovered	N/A	Ft.	Inspected By: <u>J. Cramber</u>	_____
Soil Samples	N/A	In. Diam.	Classification By: <u>J. Cramber</u>	_____
Soil Samples	N/A	In. Diam.	Classification By:	_____

DEPTH	CORE/SAMPLE			BLOWS PER FT.	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
	NO.	SIZE	DEPTH RANGE	CORE REC'D		
0-20			0.0 TO		20 FT. SINK IN WITH WEIGHT OF HAMMER.	
1.0						
2.0						
3.0				3	DOVE "AW" ROD PROBE FROM 0.0	
4.0				3	TO 8.0 FT. WITH 300 lb HAMMER	
5.0				5		
6.0				4		
7.0				3		
8.0					END OF PROBE AT 8.0 FT.	

GENERAL REMARKS: WATER 4.5 FT. DEEP
AT 0930 hrs. ON 5-8-84

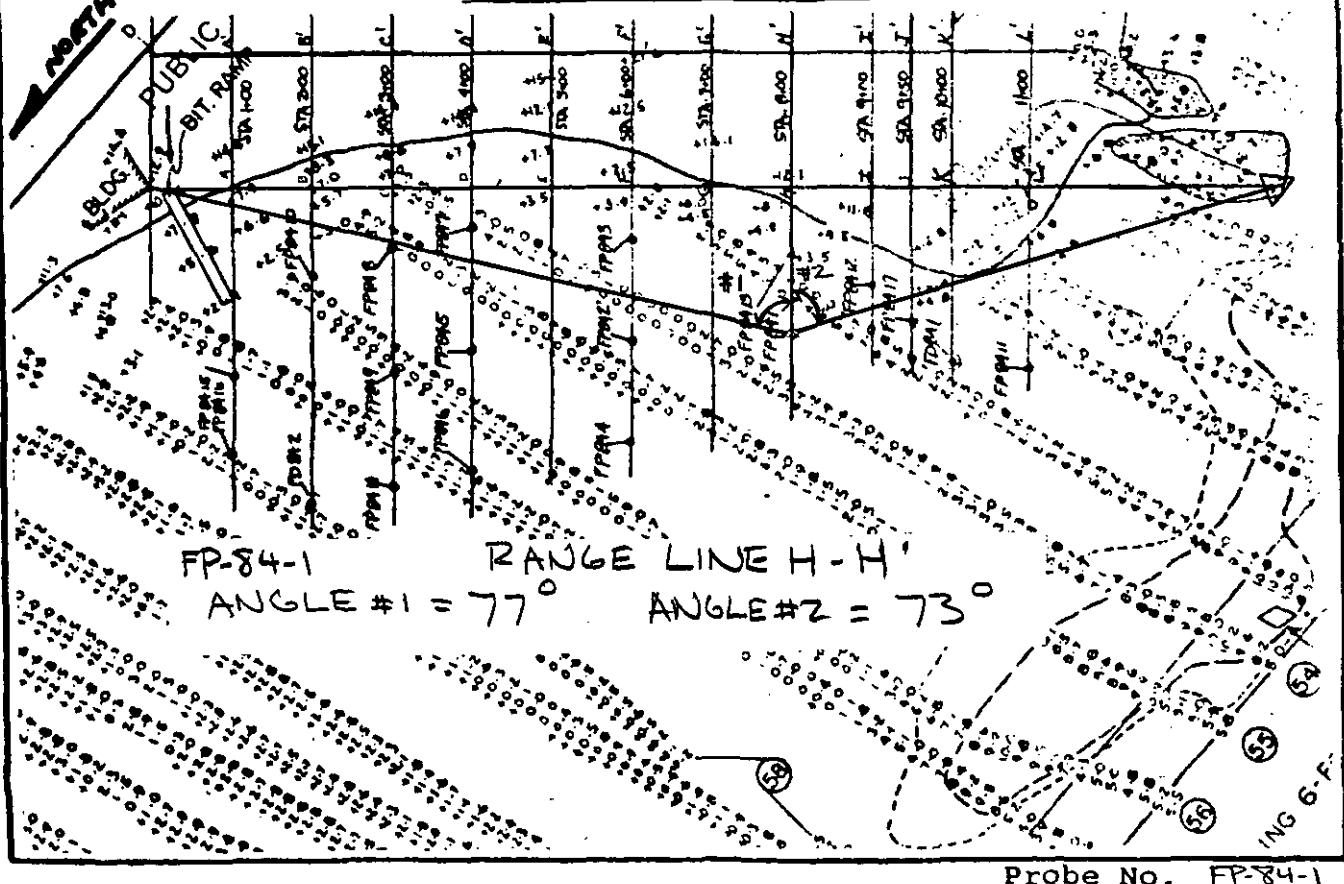
Site: PINE POINT ME

Probe No. FP-84-1

TIDAL OBSERVATIONS

Note: Depths are in feet below original ground or mudline.

Probe Location Sketch



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FIELD LOG OF TEST PROBE

Site Pine Point Harbor, ME Page 1 of 2 Pages

Probe FP-84-2 Design P-15 Diam. (Casing) N/A

Co-ordinates: N _____ E _____

Elevation Top	0.3	M.S.L.	Hammer Wt. 300 lbs	Started 5-9-84
Total Overburden Drilled	10.5	Feet	Hammer Drop 18°	Completed 5-9-84
Elevation Top of Rock	-	M.S.L.	Casing Left -	
Total Rock Drilled	N/A	Feet	Subsurface Water Data	Page
Elevation Bottom	10.2	M.S.L.	Obs. Well -	
Total Depth	10.5	Feet	Drilled By EASTERN GEOTECHNICAL	
Core Recovered	N/A %	No. Boxes	Mfg. Date Drill II ACKER	
Core Recovered	N/A Ft	Diam. In.	Inspected By J. Cawthon	
Soil Samples	N/A	In. Diam. No.	Classification By J. Cawthon	
Soil Samples	N/A	In. Diam. No.	Classification By	

DEPTH	CORE/SAMPLE			BLOWS PER FT.	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS			
	NO.	SIZE	DEPTH RANGE	CORE RECVY					
0.0				Z	3, INCH SINKIN WITH WEIGHT OF HAMMER				
1.0				3					
2.0				3	DROVE "AW" ROD PROBE FROM 0.0 TO 10.5 FT. WITH 300 lb HAMMER.				
3.0				4					
4.0				4					
5.0				6					
6.0				6					
7.0				7					
8.0				7					
9.0				7					
10.0			10.5	7					
GENERAL REMARKS:		3	END OF PROBE AT 10.5 FT			10.5 FT			
1452 hrs. on 5-9-84									
WATER 3.0 FT Deep									

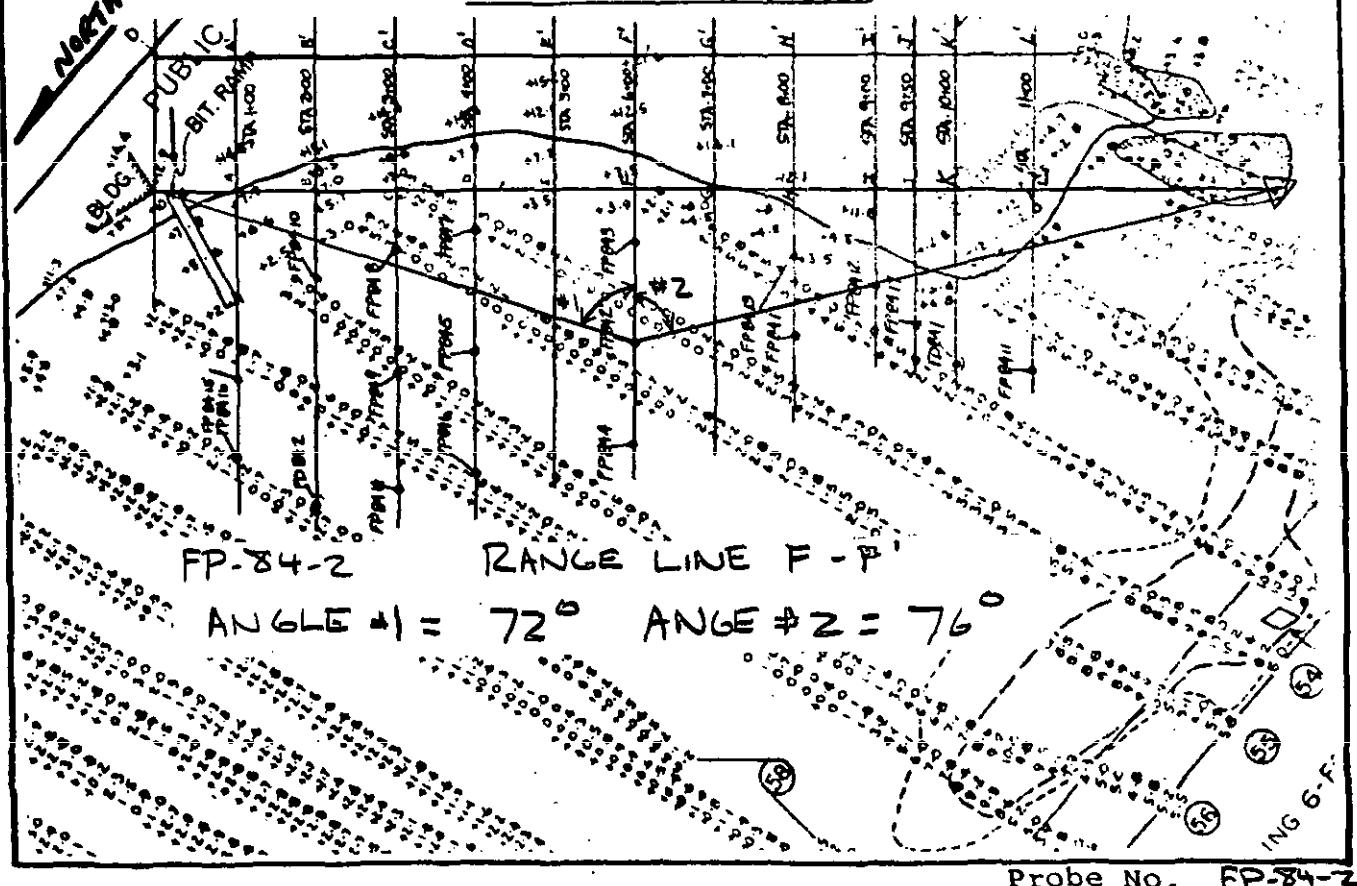
Site: PINE POINT ME

Probe No. FP-54-2

TIDAL OBSERVATIONS

Note: Depths are in feet below original ground or mudline.

Probe Location Sketch



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NEW ENGLAND DIVISION

Site Pine Point Harbor ME Page 1 of 2 Pages

Probe FP-84-3 Desig. P-16 Diam. (Casing)

FIELD LOG OF TEST PROBE

Co-ordinates: N _____ E _____

Elevation Top	2.5	MLW	Hammer Wt. 300 lbs,	Started 5-9-84
Total Overburden Drilled	8.0	M.S.L.	Hammer Drop 18"	Completed 5-9-84
Elevation Top of Rock	—	M.S.L.	Casing Left —	
Total Rock Drilled	N/A	Feet	Subsurface Water Data	— Page —
Elevation Bottom	—	MLW	Obs. Well —	
Total Depth	8.0	M.S.L.	Drilled By EASTERN GEOTECHNICAL ASSOC	
Core Recovered	N/A %	No. Boxes	Mfg. Date Drill ACKER	
Core Recovered	N/A ft	Diam. in.	Inspected By J. Cloutier	
Soil Samples	N/A in.	Diam. No.	Classification By J. Cloutier	
Soil Samples	N/A in.	Diam. No.	Classification By —	

DEPTH	CORE/SAMPLE	BLOWS PER FT.	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
1-2.0	NO.	SIZE RANGE	CORE RECVY	
1.0		0.0 TO	0	1.0 FT. SINK IN WITH WEIGHT OF HAMMER
2.0			1	
3.0		2		RODE "AW" ROD PROBE FROM 0.0 TO 8.0 FT. WITH 300 lb HAMMER
4.0			1	
5.0		5		
6.0		10		
7.0		7		
8.0		8.0	4	
				END OF PROBE AT 8.0 FT

GENERAL REMARKS:

WATER 6.9 FT. DEEP AT
1523 hrs. ON 5-9-84

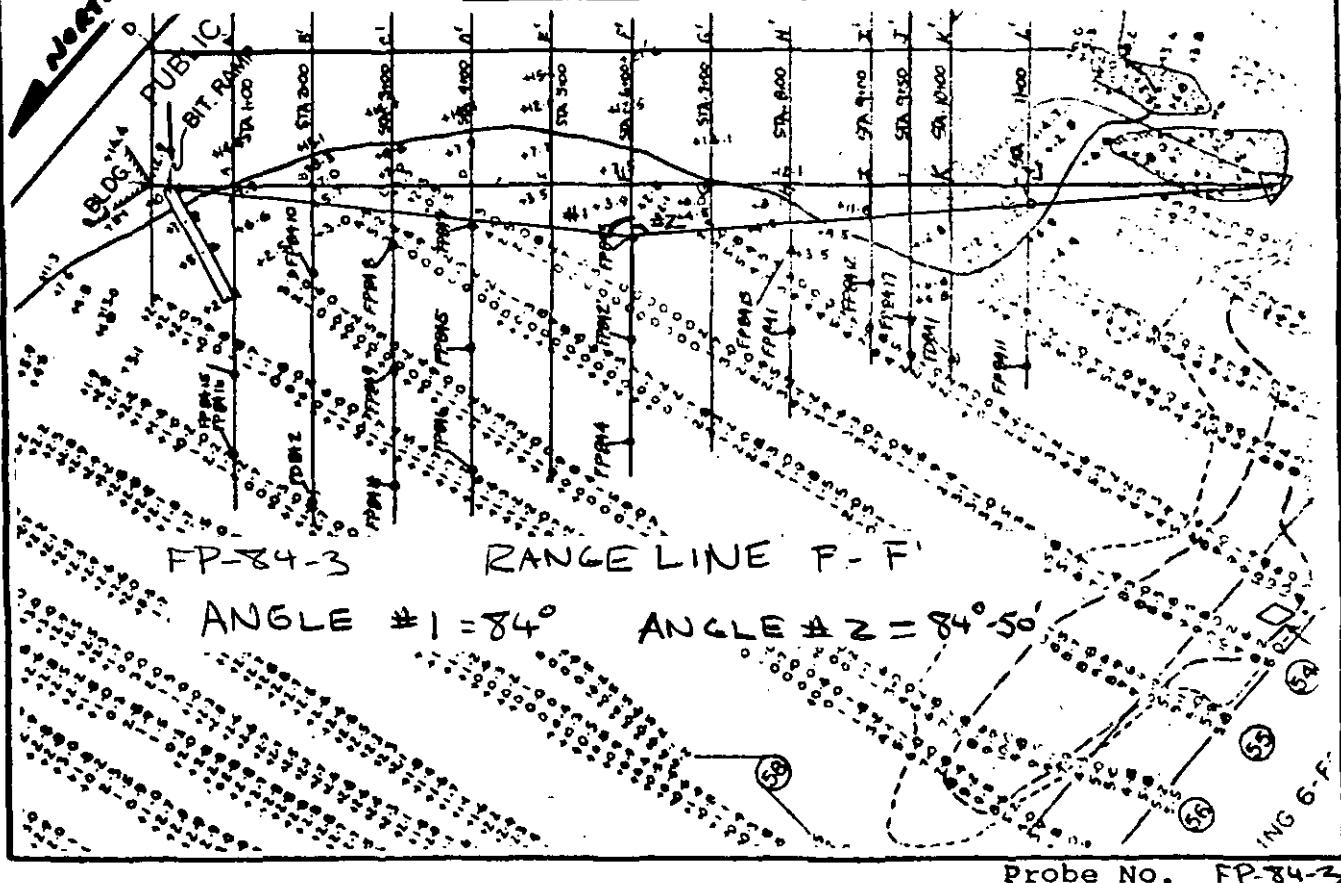
Site: PINE POINT ME

Probe No. FP-84-3

TIDAL OBSERVATIONS

Note: Depths are in feet below original ground or mudline.

Probe Location Sketch



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FIELD LOG OF TEST PROBE

Site Pine Point Harbor ME Page 1 of 2 Pages

Probe FP-84-4 Desig. P-14 Diam. (Casing) _____

Co-ordinates: N _____ E _____

Elevation Top	0.0	MLW	Hammer Wt. 300 lb	Started 5-9-84
Total Overburden Drilled	10.0	Feet	Hammer Drop 18"	Completed 5-9-84
Elevation Top of Rock	-	M.S.L.	Casing Left	
Total Rock Drilled	N/A	Feet	Subsurface Water Data	Page _____
Elevation Bottom	-10.0	MLW	Obs. Well	
Total Depth	10.0	Feet	Drilled By EASTERN GEOTECHNICAL ASSOC.	
Core Recovered	N/A	% No. Boxes	Mfg. Des. Drill ACKER	
Core Recovered	N/A	ft. Diam. in.	Inspected By J. Crotter	
Soil Samples	N/A	in. Diam. No.	Classification By J. Crotter	
Soil Samples	N/A	in. Diam. No.	Classification By	

DEPTH	CORE/SAMPLE			BLOWS PER FT.	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
	NO.	SIZE	DEPTH	CORE REC'D		
			RANGE			
0.0		20			1.5 SINKIN WITH WEIGHT OF HAMMER	
1.0		TO				
2.0			2			
3.0			3			
4.0			4			
5.0			6			
6.0			5			
7.0			3			
8.0			4			
9.0			6			
10.0			6			

GENERAL REMARKS: WATER 5.3 FT. DEEP AT 1548 hrs ON 5-9-84

SAND (INTIP) medium to fine mostly fine, 5-10% silt, fines, trace shells grey (SP-SM)

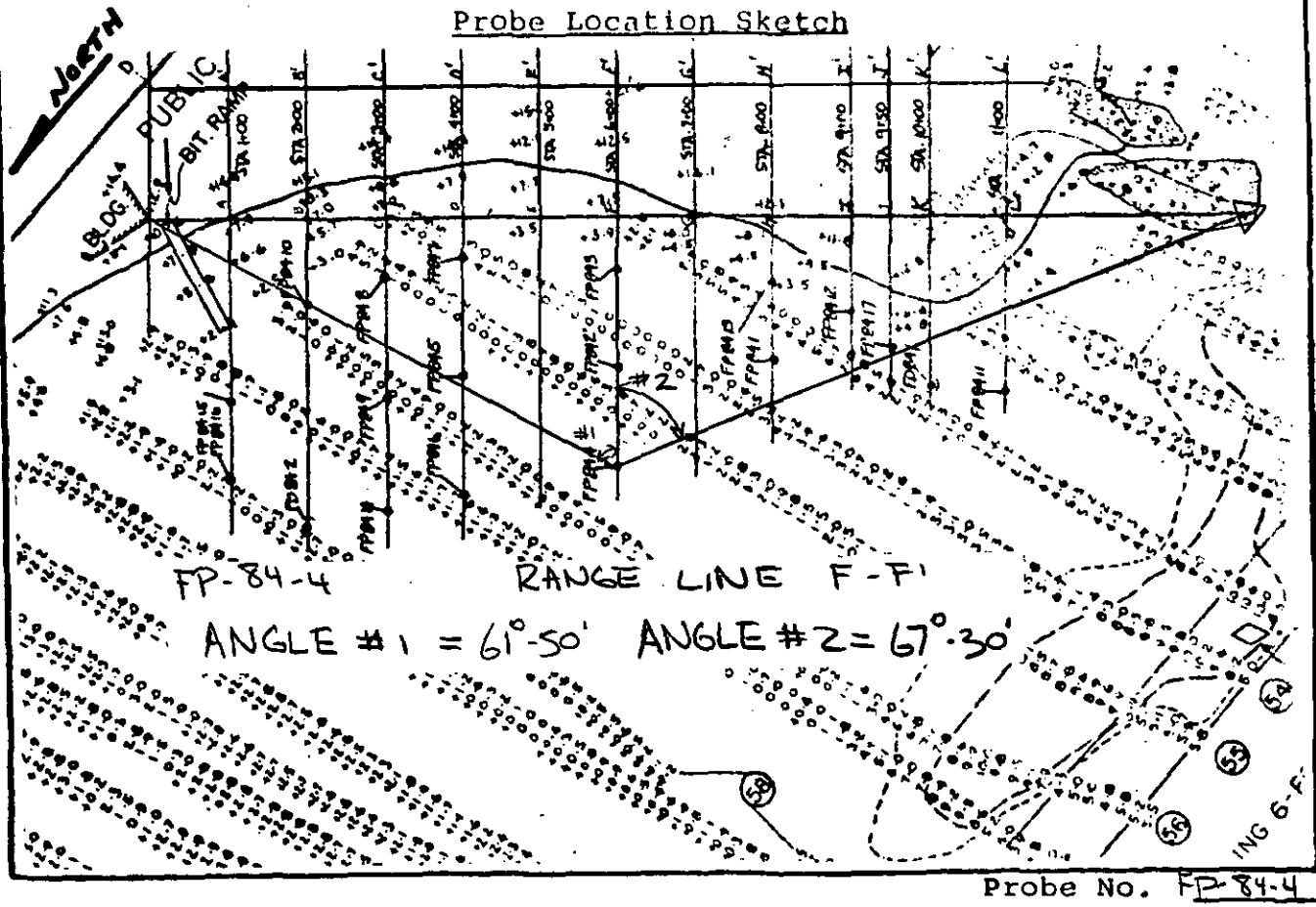
Site: PINE POINT ME

Probe No. FP-84-4

TIDAL OBSERVATIONS

Note: Depths are in feet below original ground or mudline.

Probe Location Sketch



FIELD LOG OF TEST PROBE

Probe FP-84-5 Desig. P-9 Diam. (Casing) _____

Co-ordinates: N _____ E _____

Elevation Top	0.0	MLW M.S.L.	Hammer Wt. 300lb	Started 5-9-84
Total Overburden Drilled	10.0	Feet	Hammer Drop 18"	Completed 5-9-84
Elevation Top of Rock	-	M.S.L.	Casing Left	
Total Rock Drilled	N/A	Feet	Subsurface Water Data	Page _____
Elevation Bottom	-10.0	MLW M.S.L.	Obs. Well	
Total Depth	10.0	Feet	Drilled By EASTERN GEOTECHNICAL ASSOC.	
Core Recovered	N/A %	No. Boxes	Mfg. Date Drill II ACKER	
Core Recovered	N/A Ft.	Diam. in.	Inspected By J. Croft	
Soil Samples	N/A in.	Diam. No.	Classification By J. Croft	
Soil Samples	N/A in.	Diam. No.	Classification By	

DEPTH	CORE/SAMPLE			BLOWS PER FT.	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
1'-20'	NO.	SIZE	DEPTH	CORE REC'DY		
			RANGE			
1.0			0.0 TO		3.0 FT. SINKIN WITH WEIGHT OF HAMMER.	
2.0						
3.0						
4.0			4		DOVE "AW" ROD	
5.0			5		PROBE FROM 0.0 TO 10.0 FT. WITH 300 lb HAMMER.	
6.0			5			
7.0			4			
8.0			5			
9.0			7			
10.0			9		END OF PROBE AT 10.0 FT.	

GENERAL REMARKS: WATER 6.0 FT DEEP AT 1609 AM ON 5-9-84

SILTY SAND (IN RODS)
fine, 10-20% n.p. fines
dark grey (SM)

SAND (INTIP) fine, 5-10%
n.p. fines, grey
(SP-SM)
10.0 FT.

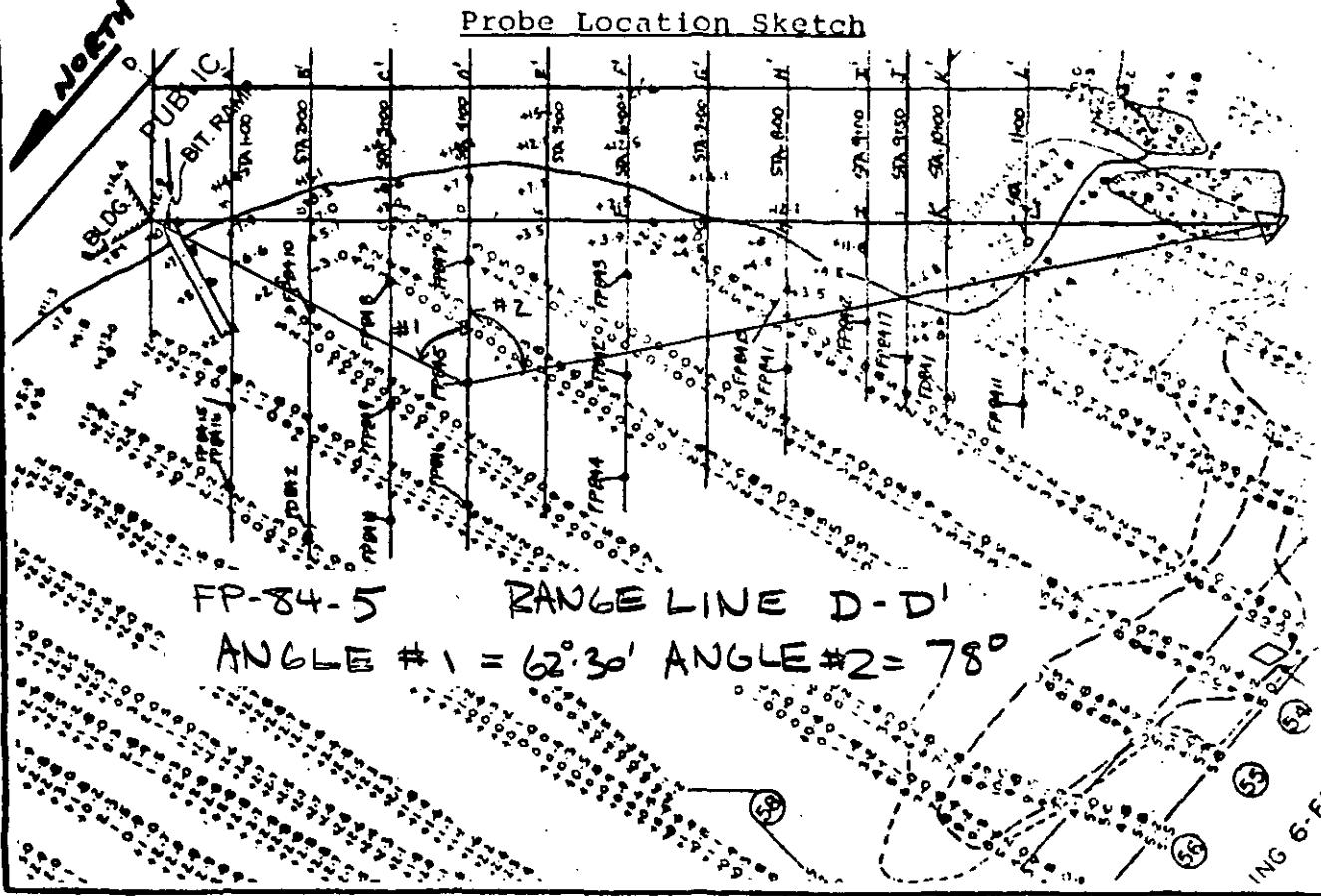
Site: PINE POINT ME

Probe No. FP-84-5

TIDAL OBSERVATIONS

Note: Depths are in feet below original ground or mudline.

Probe Location Sketch



FP-84-5 RANGE LINE D-D

ANGLE #1 = $62^\circ 30'$ ANGLE #2 = 78°

Probe No. FP-34-5

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NEW ENGLAND DIVISION

FIELD LOG OF TEST PROBE

Site Pine Point Harbor, ME Page 1 of 3 Pages

Probe FP-84-6 Desig. P-8 Diam. (Casing)

Co-ordinates: N _____ E _____

Elevation Top	<u>1.5</u>	MLW	Hammer Wt. <u>300 lbs.</u>	Started <u>5-9-84</u>
Total Overburden Drilled	<u>12.0</u>	M.S.L. Feet	Hammer Drop <u>15"</u>	Completed <u>5-9-84</u>
Elevation Top of Rock	-	M.S.L.	Casing Left	
Total Rock Drilled	<u>N/A</u>	Feet	Subsurface Water Data	Page _____
Elevation Bottom	<u>-10.5</u>	MLW	Obs. Well	
Total Depth	<u>12.0</u>	Feet	Drilled By <u>EASTERN GEOTECHNICAL ASSOC.</u>	
Core Recovered	<u>N/A</u> %	No. Boxes	Mfg. Des. Drill <u>ACKER</u>	
Core Recovered	<u>N/A</u> Ft.	Diam. In.	Inspected By: <u>J. Cloutier</u>	
Soil Samples	<u>N/A</u>	In. Diam. No.	Classification By: <u>J. Cloutier</u>	
Soil Samples	<u>N/A</u>	In. Diam. No.	Classification By:	

DEPTH	CORE/SAMPLE			SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
	NO.	SIZE	DEPTH RANGE		
0-20			0.0 TO	1.5 FT. SINK IN WITH WEIGHT OF HAMMER	
1.0					
2.0					
3.0					
4.0					
5.0					
6.0					
7.0					
8.0					
9.0					
10.0					

GENERAL REMARKS: WATER 5.6 FT. DEEP AT 1645 hrs on 5-9-84

Site: Pine Point Harbor ME					Probe No. FP-84-6	Page <u>2</u> of <u>3</u>
DEPTH ft. 20	CORE/SAMPLE NO. 120			BLOWS PER FT. CORE RECVY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
				10		SAND (INTIP) fine, 5-10% nonplastic fines, grey (SP-SM) 12.0 FT
11.0				12	END OF PROBE AT 12.0	

Probe No. FP-84-6

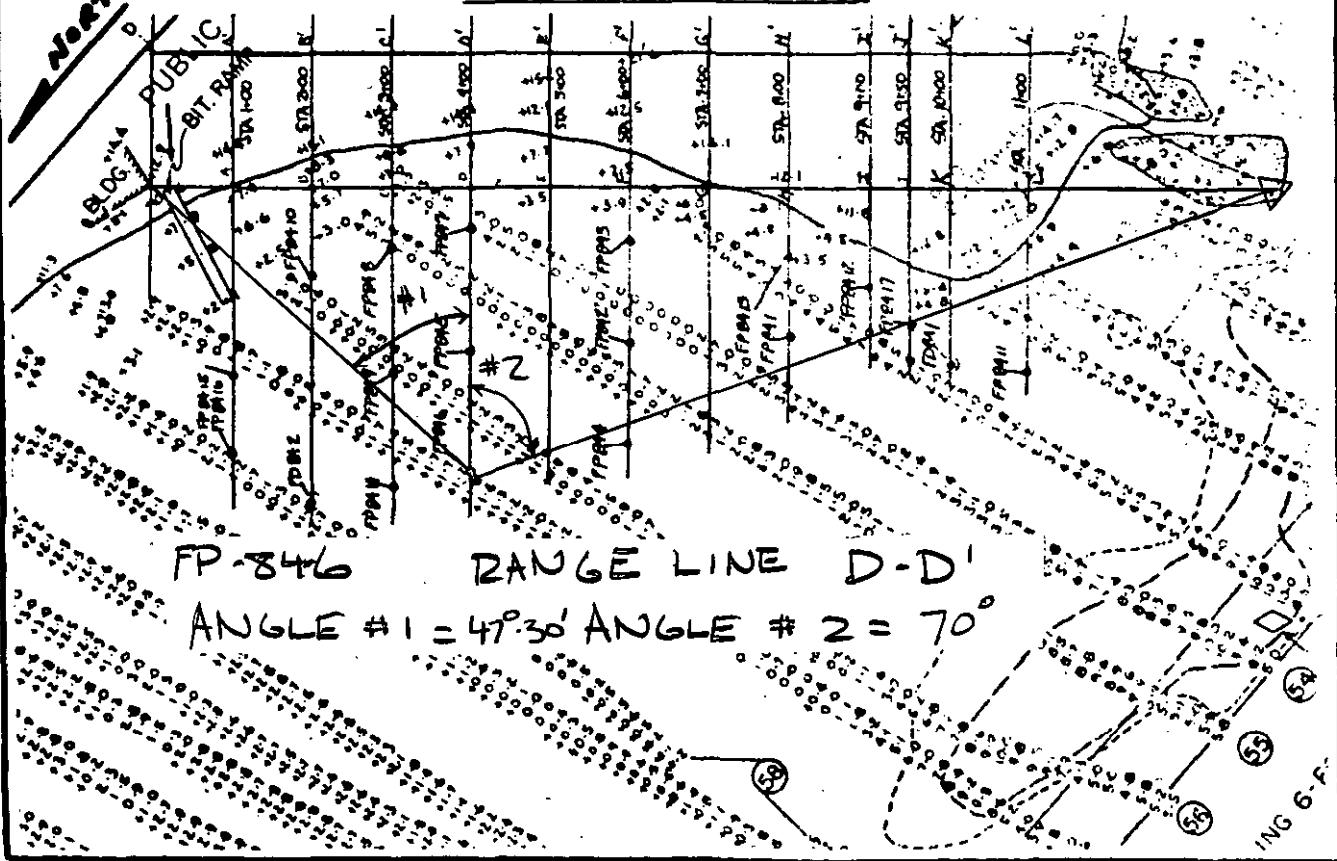
Site: PINE POINT ME

Probe No. FP-84-C

TIDAL OBSERVATIONS

Note: Depths are in feet below original ground or mudline.

Probe Location Sketch



FP-846 RANGE LINE D-D'

ANGLE #1 = $47^{\circ}30'$ ANGLE #2 = 70°

Probe No. FP-84-C

U.S. ARMY
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NEW ENGLAND DIVISION

FIELD LOG OF TEST PROBE

Site Pine Point Harbor ME Page 1 of 2 Pages

Probe FP84-7 Desig. P-10 Diam. (Casing) _____

Co-ordinates: N _____ E _____

Elevation Top	-4.7	M.L.W.	Hammer Wt. <u>300 lbs</u>	Started <u>5-9-84</u>
Total Overburden Drilled	<u>7.0</u>	Feet	Hammer Drop <u>18"</u>	Completed <u>5-9-84</u>
Elevation Top of Rock	—	M.S.L.	Casing Left	—
Total Rock Drilled	N/A	Feet	Subsurface Water Data	— Page —
Elevation Bottom	-11.7	M.L.W.	Obs. Wall	—
Total Depth	7.0	Feet	Drilled By <u>EASTERN GEOTECHNICAL ASSOC</u>	
Core Recovered	N/A	% No. Boxes	Mfg. Des. Drill <u>ACHTER</u>	
Core Recovered	N/A	Ft. Diam. In.	Inspected By: <u>J. Crouther</u>	
Soil Samples	N/A	In. Diam. No.	Classification By: <u>J. Crouther</u>	
Soil Samples	N/A	In. Diam. No.	Classification By:	

DEPTH	CORE/SAMPLE			SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
	NO.	SIZE	DEPTH		
				CORE REC'DY	
1.0			0.0	3.5 FT. SINK IN WITH WEIGHT OF HAMMER	
2.0			TO		
3.0				DROVE "AW" ROD PROBE FROM 0.0 TO 7.0 FT, WITH 300lb. HAMMER	
4.0			Z		
5.0			Z		
6.0			0		
7.0			Z		
				END OF PROBE AT 7.0 FT	

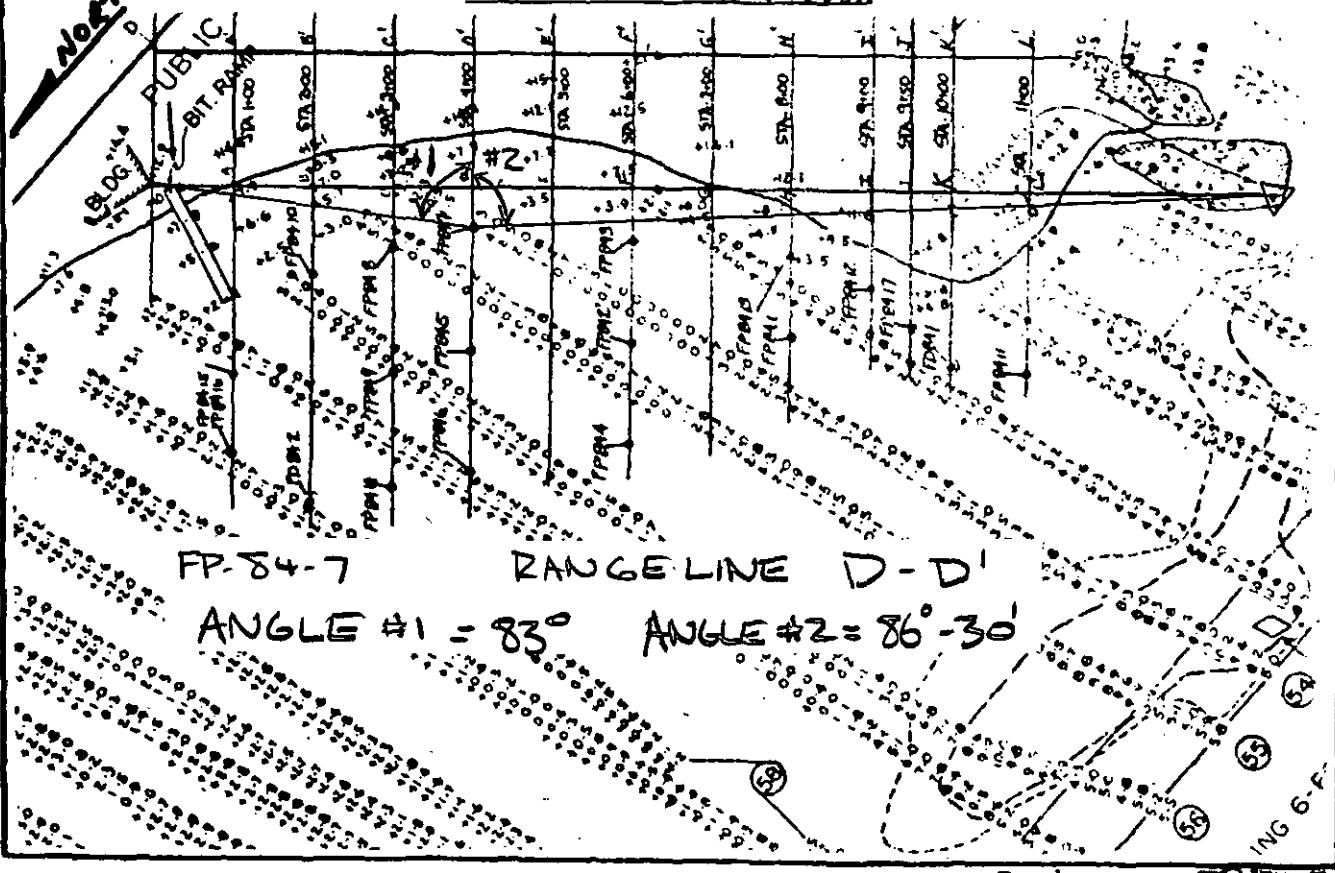
GENERAL REMARKS: WATER 13.0 FT DEEP AT 1746 hrs. ON 59-84

Site: PINE POINT ME
Probe No. FP-84-7

TIDAL OBSERVATIONS

Note: Depths are in feet below original ground or mudline.

Probe Location Sketch



Probe No. FP-84-7

**U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION**

Site Pine Point Harbor ME Page 1 of 2 Pages

FIELD LOG OF TEST PROBE

Co-ordinates: N _____ E _____

Elevation Top	-3.6	M.L.W. M.S.T.	Hammer Wt. 300 lbs	Started 5-10-54
Total Overburden Drilled	8	Feet	Hammer Drop 15"	
Elevation Top of Rock	-	M.S.L.	Casing Loft -	Completed 5-10-54
Total Rock Drilled	N/A	Foot M.L.W.	Subsurface Water Data	Page -
Elevation Bottom	-11.6	M.S.T.	Obs. Well -	
Total Depth	8	Foot	Drilled By EASTERN GEOTECHNICAL ASSOC.	
Core Recovered	N/A %	No. Boxes	Mfg. Due. Drill ACKER	
Core Recovered	N/A Ft.	Diam. In.	Inspected By S. Cranton	
Soil Samples	N/A	In. Diam. No.	Classification By S. Cranton	
Soil Samples	N/A	In. Diam. No.	Classification By	

DEPTH	CORE/SAMPLE			BLOWS PER FT. CORE RECVY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
1" 2.0	NO.	SIZE	DEPTH RANGE			
1.0			0.0 TO		3.5FT. SINK IN WITH WEIGHT OF HAMMER.	
2.0						
3.0						
4.0				2		
5.0				5		
6.0				3		
7.0				2		
8.0			8.0	3		
					END OF PROBEAT 8.0 FT	

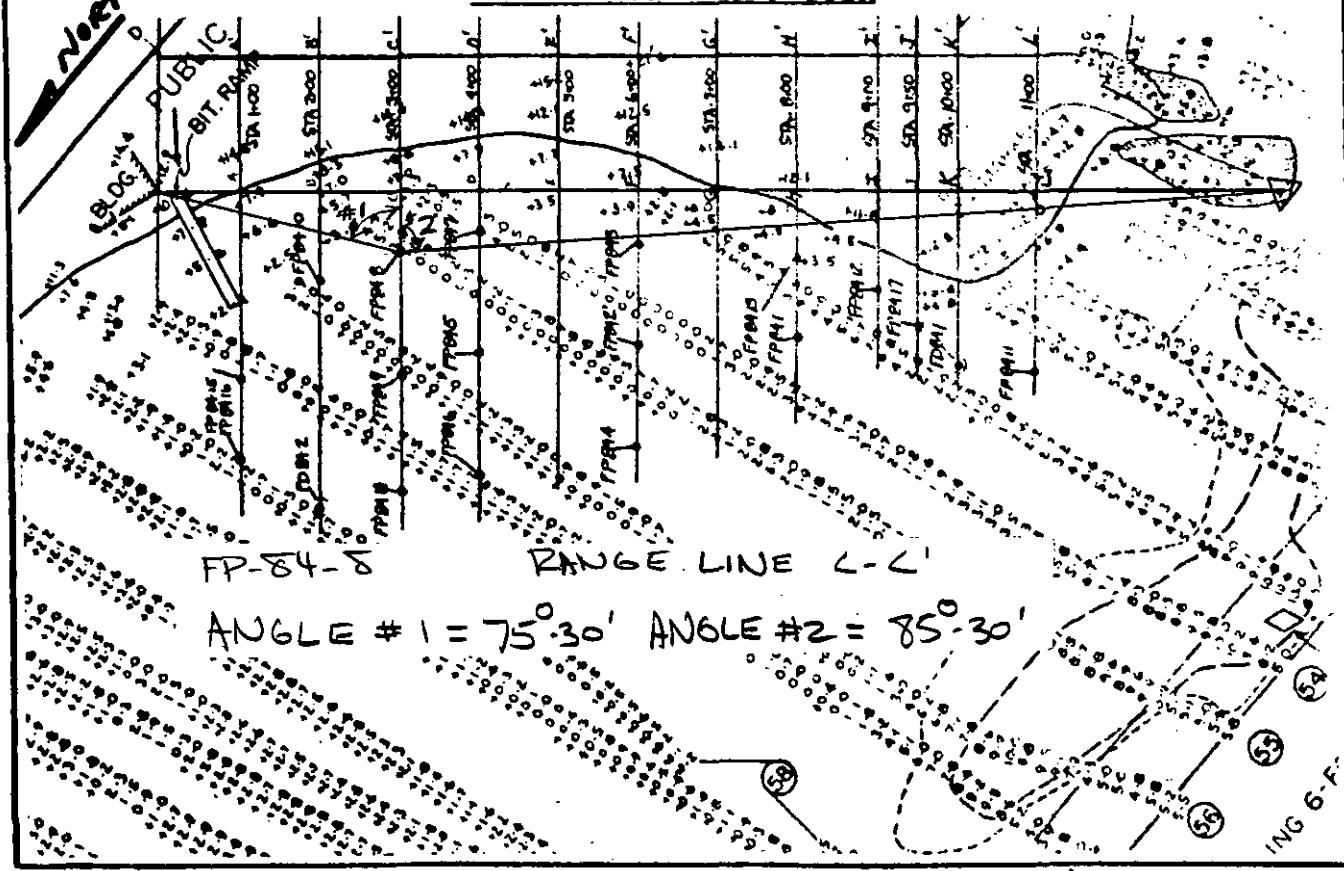
Site: PINEPOINT ME

Probe No. FP-84-8

TIDAL OBSERVATIONS

Note: Depths are in feet below original ground or mudline.

Probe Location Sketch



ANGLE #1 = $75^{\circ}30'$ ANGLE #2 = $85^{\circ}30'$

Probe No. FP-S4-X

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NEW ENGLAND DIVISION

Site Pine Point Harbor ME Page 1 of 2 Pages

Probe FP-84-9 Desig. P-G Diam. (Casing) _____

FIELD LOG OF TEST PROBE

Co-ordinates: N _____ E _____

Elevation Top	- 0.15	M.S.L.	Hammer Wt. <u>300 lbs.</u>	Started <u>5-10-84</u>
Total Overburden Drilled	<u>10.0</u>	Feet	Hammer Drop <u>18"</u>	Completed <u>5-10-84</u>
Elevation Top of Rock	-	M.S.L.	Casing Loft -	Subsurface Water Data - Page -
Total Rock Drilled	N/A	Feet	Obs. Well -	Drilled By <u>EASTERN GEOTECHNICAL ASSOC.</u>
Elevation Bottom	- 10.15	M.S.L.	Mfg. Date Drill <u>ACKER</u>	Inspected By: <u>J. Goutier</u>
Total Depth	<u>10.0</u>	Feet	Classification By: <u>J. Goutier</u>	Soil Samples N/A In. Diam. No.
Core Recovered	N/A %	No. Boxes	Classification By:	Soil Samples N/A In. Diam. No.
Core Recovered	N/A Ft :	Diam. In.		
Soil Samples	N/A	In. Diam. No.		
Soil Samples	N/A	In. Diam. No.		

DEPTH	CORE/SAMPLE			SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
	NO.	SIZE	DEPTH		
1.0-2.0		0.0-10.0	CORE REC'D		
1.0		0.0-7.0		ZOFT. SINK IN WITH WEIGHT OF HAMMER.	
2.0					
3.0	3			DRAG "AW" ROD PROBE FROM 0.0 TO 10.0 FT. WITH 300 lb. HAMMER.	SILTSAND (IN RODS NEAR TOP) fine sand, 10-15% slightly to non plastic fines, dark grey (SM)
4.0	4				
5.0	3				
6.0	5				
7.0	4				
8.0	5				
9.0	32				
10.0	32			END OF PROBE AT 100 FT.	SAND (INTIP), fine sand 5-10% non plastic fines, grey (SP-SM)

GENERAL REMARKS: WATER 5.25 FT. DEEP AT 1015 hrs ON 5-10-84

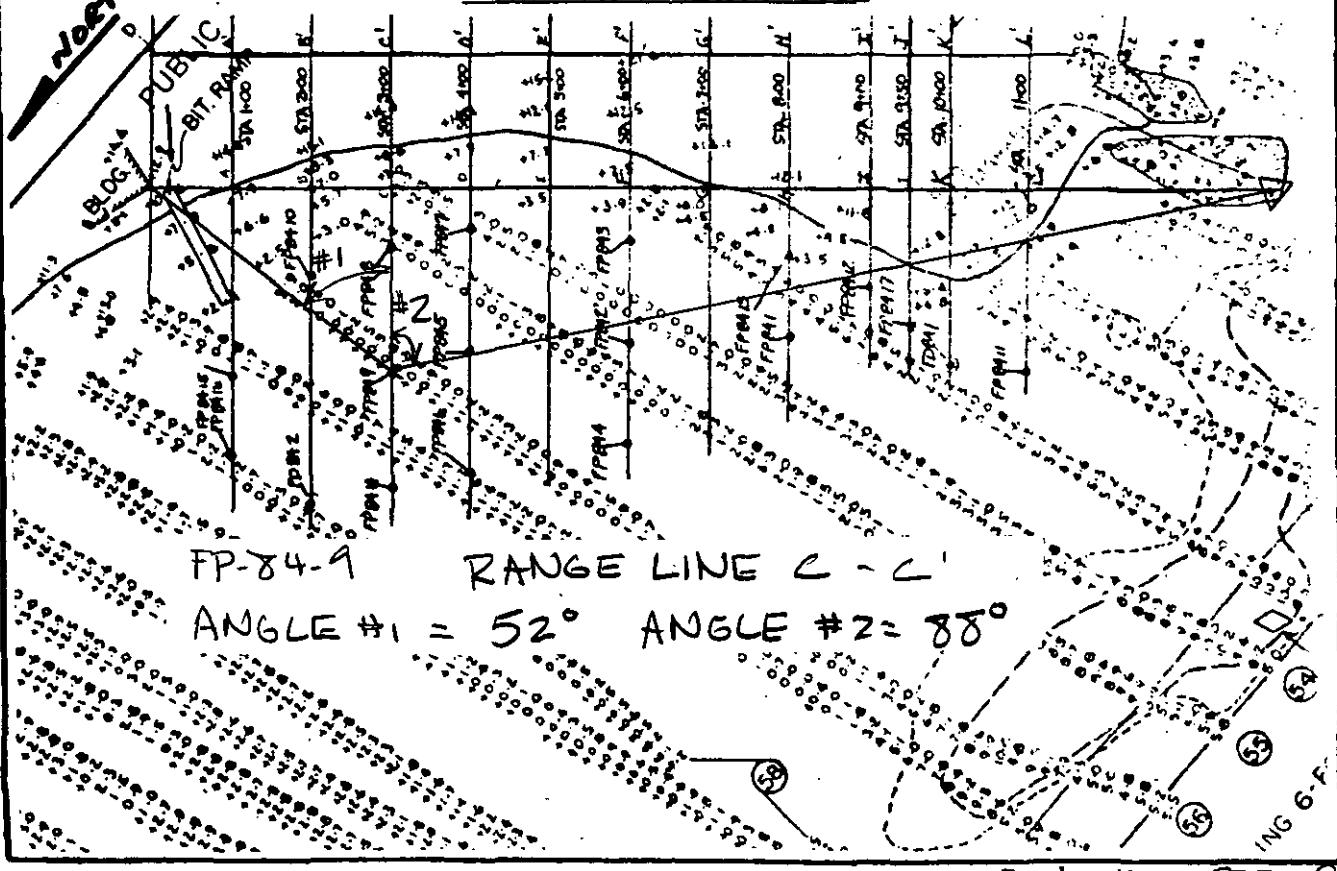
Site: PINE POINT ME

Probe No. EP-84-9

TIDAL OBSERVATIONS

Note: Depths are in feet below original ground or mudline.

Probe Location Sketch



Probe No. FP-84-9

**U. S. ARMY
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NEW ENGLAND DIVISION**

FIELD LOG OF TEST PROBE

Site: Pine Point Harbor ME Page 1 of 2 Pages

Probe FP-84-10 Desig. P-4 Diam. (Casing) _____

Co-ordinates: N _____ E _____

Elevation Top	<u>-5.4</u>	m.L.W.	Hammer Wt. <u>300 lbs</u>	Started <u>5-10-84</u>
Total Overburden Drilled	<u>8.0</u>	Feet	Hammer Drop <u>18"</u>	
Elevation Top of Rock	<u>-</u>	M.S.L.	Casing Left <u>-</u>	Completed <u>5-10-84</u>
Total Rock Drilled	<u>N/A</u>	Feet	Subsurface Water Data	<u>-</u> Page <u>-</u>
Elevation Bottom	<u>-13.4</u>	M.S.L.	Obs. Well <u>-</u>	
Total Depth	<u>8.0</u>	Feet	Drilled By <u>EASTERN GEOTECHNICAL Assoc.</u>	
Core Recovered	<u>N/A</u> %	No. Boxes <u>-</u>	Mfg. Date Drill <u>ACKER</u>	
Core Recovered	<u>N/A</u> Ft.	Diam. <u>-</u> In.	Inspected By: <u>J. Crowther</u>	
Soil Samples	<u>N/A</u>	In. Diam. <u>-</u> No.	Classification By: <u>J. Crowther</u>	
Soil Samples	<u>N/A</u>	In. Diam. <u>-</u> No.	Classification By: <u>-</u>	

DEPTH	CORE/SAMPLE			BLOWS PER FT. CORE REC'DY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
	NO.	SIZE	DEPTH RANGE			
1'-2'			0.0 TO 1.0	1	6" SNK IN WITH WEIGHT OF HAMMER	
2.0				1		
3.0				1	DROVE "AW" ROD PROBE FROM 0.0 TO 10.0 FT.	
4.0				1	WITH 300lb HAMMER.	
5.0				3		
6.0				6		
7.0				3		
8.0	1.0			4		
					END OF PROBE AT 8.0 FT	
						SILTY SAND (INTIP) Fine Sand; 10-15% slightly-to- non plastic fines, dark grey (SM) F.O.

GENERAL REMARKS: WATER 8.9 FT. DEEP AT 1055hrs.
ON 5-10-84

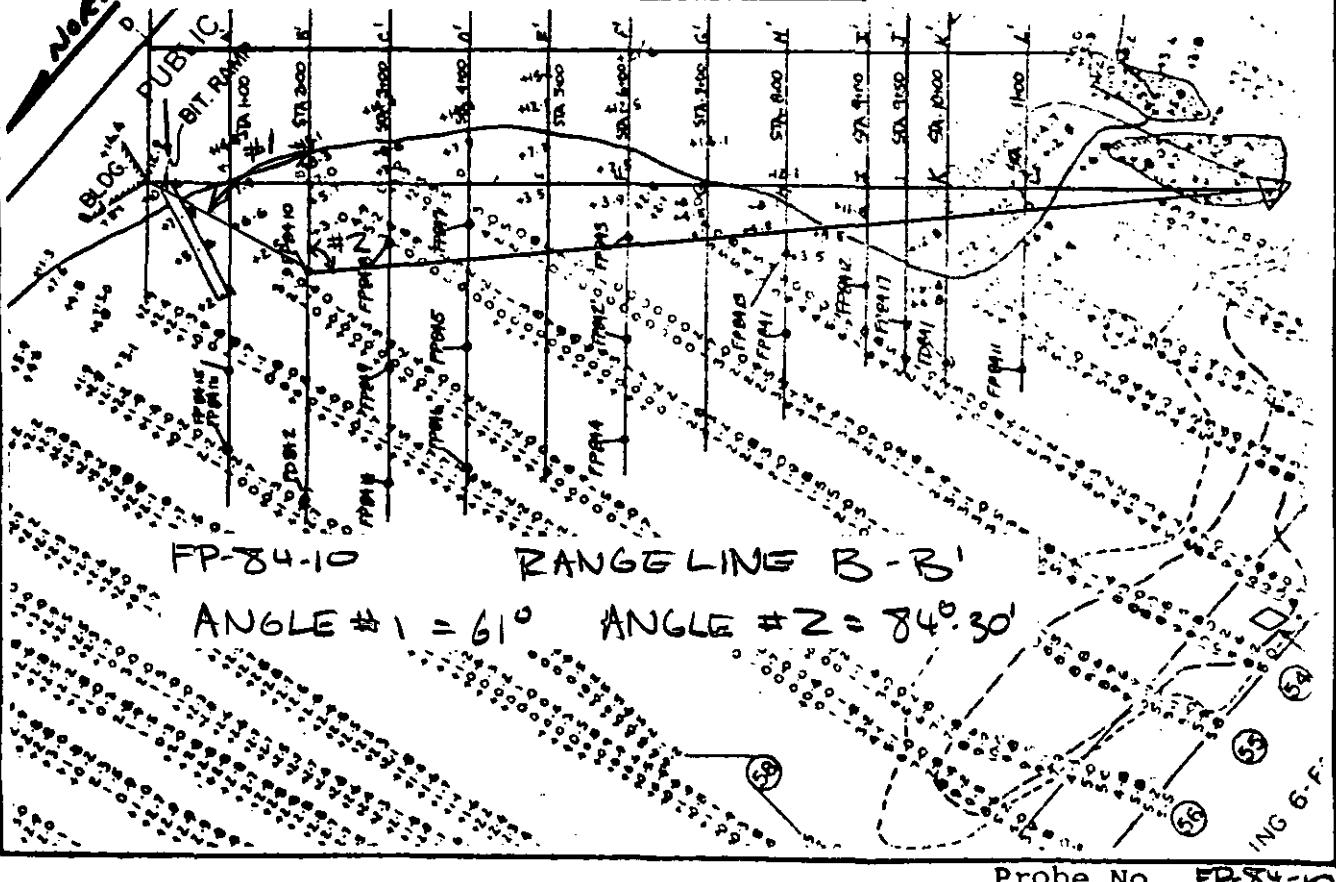
Site: PING POINT ME

Probe No. EP-84-10

TIDAL OBSERVATIONS

Note: Depths are in feet below original ground or mudline.

Probe Location Sketch



U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST PROBE

Site Pine Point Harbor ME Page 1 of 2 Pages

Probe FP-84-11 Desig. P-24 Diam. (Casing) _____

Co-ordinates: N _____ E _____

Elevation Top	-4.0	M.L.W. M.S.L.	Hammer Wt. <u>300 lbs</u>	Started <u>5-10-84</u>
Total Overburden Drilled	<u>6.0</u>	Feet	Hammer Drop <u>15"</u>	Completed <u>5-10-84</u>
Elevation Top of Rock	-	M.S.L.	Casing Loft -	
Total Rock Drilled	<u>N/A</u>	Feet	Subsurface Water Data	- Page -
Elevation Bottom	<u>70.0</u>	M.S.L.	Obs. Well -	
Total Depth	<u>6.0</u>	Feet	Drilled By <u>EASTERN GEOTECHNICAL ASSOC.</u>	
Core Recovered	<u>N/A</u>	% No. Boxes	Mfg. Date Drill II <u>ACKER</u>	
Core Recovered	<u>N/A</u>	ft : Diam. in.	Inspected By: <u>J. Cramter</u>	
Soil Samples	<u>N/A</u>	in. Diam. No.	Classification By: <u>J. Cramter</u>	
Soil Samples	<u>N/A</u>	in. Diam. No.	Classification By:	

DEPTH 1' = <u>Z.0</u>	CORE/SAMPLE NO.	SIZE DEPTH RANGE	BLOWS PER FT. CORE RECVY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
1.0		20	8		
2.0		TO	39	DROVE 'AW' ROD PROBE FROM 0.0 TO 6.0 FT.	
3.0			8	WITH 300 LB. HAMMER	
4.0			15		
5.0			30		
6.0		6.0	19		
				END OF PROBE AT 6.0 FT.	<u>SILTY SAND (INTIP)</u> coarse to fine sand, mostly fine, 5-10% gravel, gray (SM) POSS. GLACIAL TILL 6.0 FT.

GENERAL REMARKS: WATER 5.0 FT. DEEP AT 1305
hrs ON 5-10-84

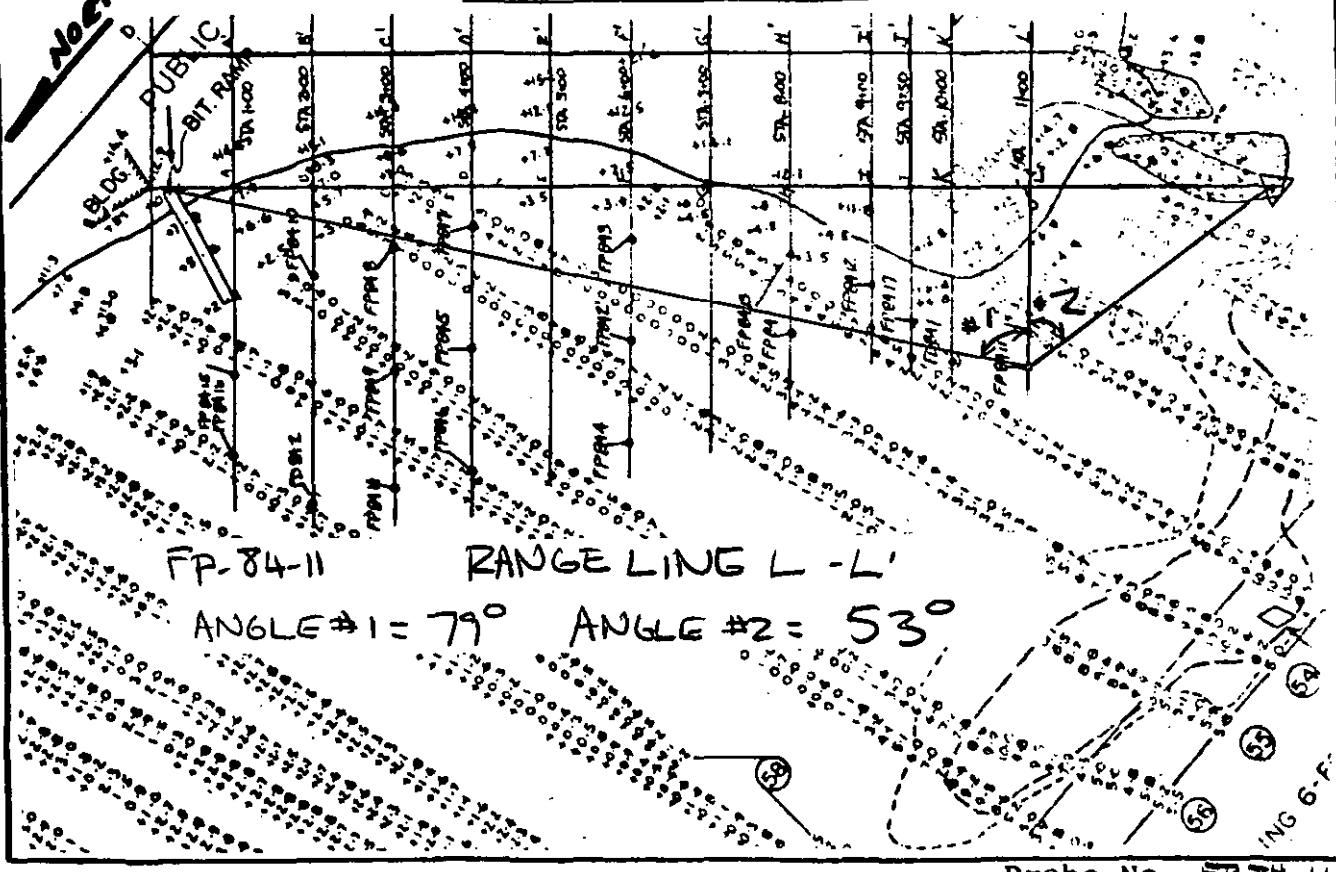
Site: PINE POINT ME

Probe No. FP-84-11

TIDAL OBSERVATIONS

Note: Depths are in feet below original ground or mudline.

Probe Location Sketch



Revista Brasileira de Genética - Rio de Janeiro - RJ - Brasil

$$\text{ANGLE } \#1 = 79^\circ \quad \text{ANGLE } \#2 = 53^\circ$$

Probe No. F-84-11

U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST PROBE

Site Pine Point Harbor ME Page 1 of 3 Pages

Probe FP-84-12 Desig. P-22 Diom. (Casing) _____

Co-ordinates: N _____ E _____

Elevation Top	3.9	M.L.W.	Hammer Wt. 300 lbs	Started 5-11-84
Total Overburden Drilled	14.0	Feet	Hammer Drop 18"	Completed 5-11-84
Elevation Top of Rock	-	M.S.L.	Casing Left -	
Total Rock Drilled	N/A	Feet	Subsurface Water Data -	Page -
Elevation Bottom	-10.1	M.L.W.	Obs. Well -	
Total Depth	14.0	Feet	Drilled By EASTERN GEOTECHNICAL ASSOC.	
Core Recovered	N/A %	No. Boxes	Mfg. Des. Drill ACKER	
Core Recovered	N/A Ft.	Diam. In.	Inspected By J. Cartier	
Soil Samples	N/A	In. Diam. No.	Classification By J. Cartier	
Soil Samples	N/A	In. Diam. No.	Classification By	

DEPTH	CORE/SAMPLE			SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
	NO.	SIZE	DEPTH RANGE		
1.0-2.0			0.0 TO	1.0 FT SINKIN WITH WEIGHT OF HAMMER	
2.0			1.0		
3.0			2.0		
4.0			3.0		
5.0			4.0		
6.0			5.0		
7.0			6.0		
8.0			7.0		
9.0			8.0		
10.0			9.0		
			10.0		

GENERAL REMARKS:

WATER SOFT. DEEP AT 0930 hrs ON 5-11-84

Site: Pine Point Harbor ME				Probe No. FP-84-12	Page <u>2</u> of <u>3</u>
DEPTH FT	CORE/SAMPLE NO.	CORE SIZE DEPTH RANGE	BLOWS PER FT. CORE RECVY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
11.0			17		
12.0			18		SAND (INTIP) fine sand
13.0			17		5-10% non plastic fines
14.0		14.0	23		light gray (SP-SM)
				END OF PROBE AT 14.0 FT	14.0

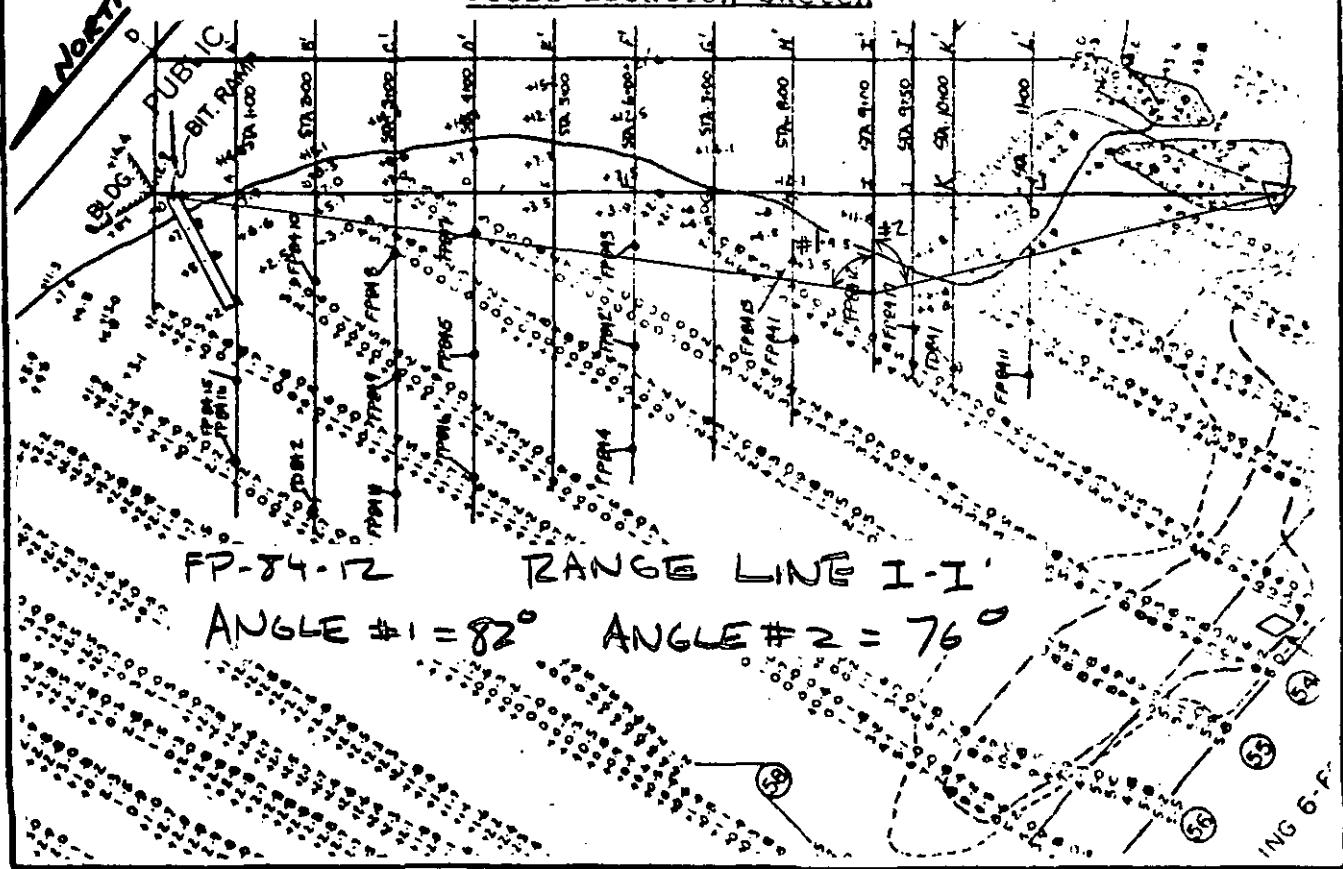
Probe No. FP-84-12

Site: PINE POINT ME
Probe No. FP-84-12

TIDAL OBSERVATIONS

Note: Depths are in feet below original ground or mudline.

Probe Location Sketch



ANSWER — *See* *Answer* *in* *Index*

$$\text{ANGLE } \#1 = 82^\circ \quad \text{ANGLE } \#2 = 76^\circ$$

U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST PROBE

Site Pine Point Harbor, ME Page 1 of 3 Pages

Probe FP-84-13 Desig. P-21 Diam. (Casing) _____

Co-ordinates: N _____ E _____

Elevation Top	3.9	M.L.W.	Hammer Wt. 300 lbs	Started 5-11-84
Total Overburden Drilled	14.0	M.S.L.	Hammer Drop 18"	Completed 5-11-84
Elevation Top of Rock	—	M.S.L.	Casing Left —	
Total Rock Drilled	N/A	Feet	Subsurface Water Data	Page —
Elevation Bottom	—	M.L.W.	Obs. Well —	
Total Depth	14.0	M.S.L.	Drilled By EASTERN GEOTECHNICAL ASSOC.	
Core Recovered	N/A	%	Mfg. Date Drill II ACKER	
Core Recovered	N/A	ft:	Inspected By J. Crouther	
Soil Samples	N/A	in.	Classification By J. Crouther	
Soil Samples	N/A	in. Diam.	Classification By:	

DEPTH	CORE/SAMPLE			BLOWS PER FT.	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
1'-2.0	NO.	SIZE	DEPTH RANGE	CORE RECVY		
1.0			0.0 TO		1.5 FT. SINK IN WITH WEIGHT OF HAMMER.	
2.0			TO	2		
3.0				10	ROSE "AW" ROD	
4.0				14	PROBE FROM 0.0 TO 14.0 FT WITH 300lb HAMMER.	
5.0				18		
6.0				19		
7.0				19		
8.0				12		
9.0				11		
10.0				9		

GENERAL REMARKS: WATER 3.5 FT. DEEP AT 1034 HIS. ON 5-11-84

Site: Pine Point Harbor ME				Probe No. FP-84-13	Page <u>2</u> of <u>3</u>
DEPTH	CORE/SAMPLE		BLOWS PER FT.	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
ft 2.0	NO.	SIZE	DEPTH RANGE	CORE RECVY	
11.0				14	
12.0				24	
13.0				16	
14.0		14.0		17	SAND (INTIP) fine sand 5-10% non plastic fines, grey (SP-SM)

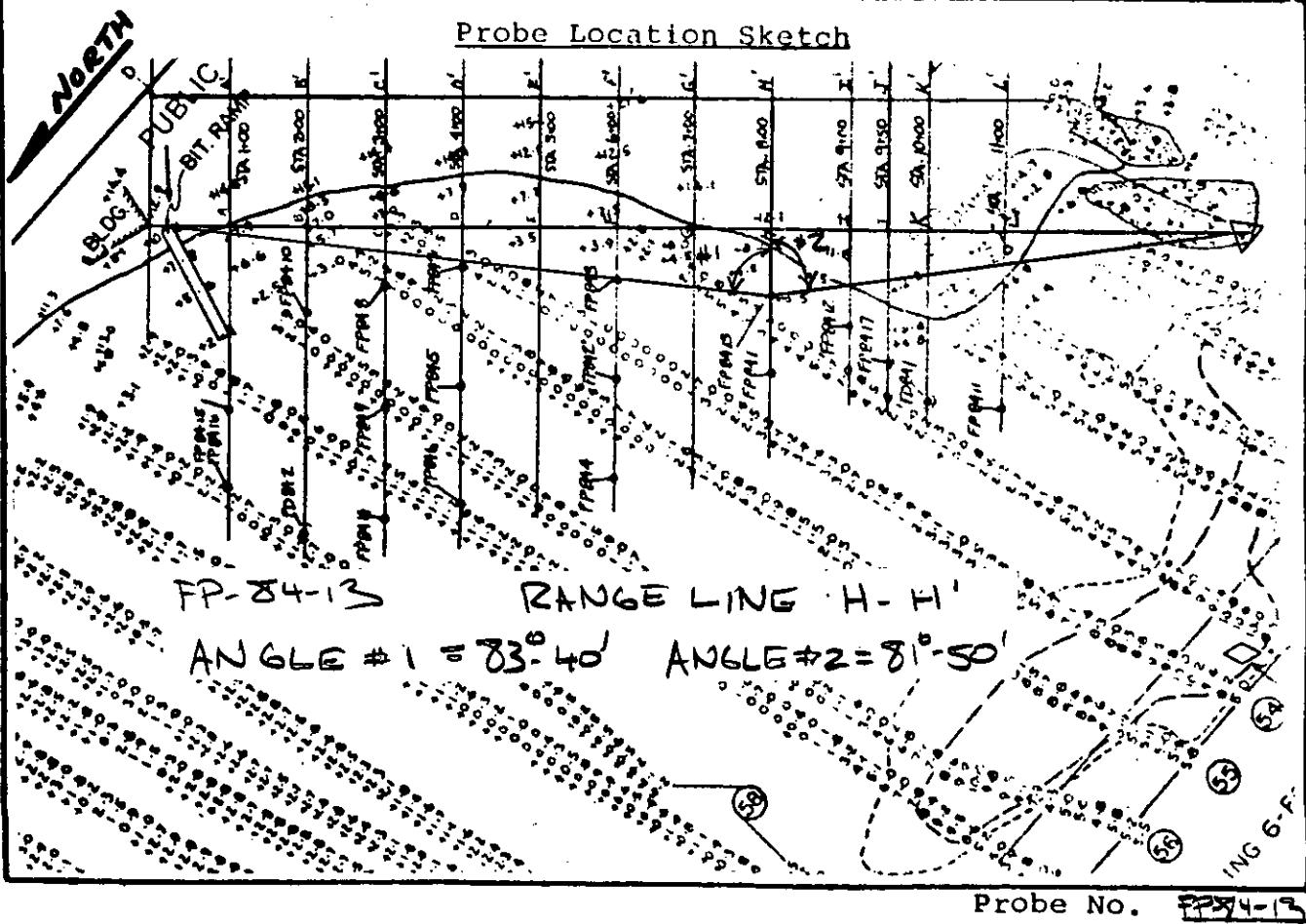
Probe No. FP-84-13

Site: PINEPOINT ME

Probe No. FD-84-13

TIDAL OBSERVATIONS

Note: Depths are in feet below original ground or mudline.



**U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION**

Site Pine Point Harbor ME Page 1 of 3 Pages

Probe FP-84-14 Design P-5 Diam. (Casing) _____

FIELD LOG OF TEST PROBE

Co-ordinates: N _____ E _____

Elevation Top	2.0	MLW	Hammer Wt.	300 lbs.	Started	5-11-84	
Total Overburden Drilled	12.0	M.S.L.	Feet	Hammer Drop	18"		
Elevation Top of Rock	-	M.S.L.		Casing Left	-	Completed	5-11-84
Total Rock Drilled	N/A		Feet				
Elevation Bottom	-10.0	MLW		Subsurface Water Data	-	Page	
Total Depth	12.0	M.S.L.	Feet	Obs. Well			
Core Recovered	N/A	%	No. Boxes	Drilled By	EASTERN GEOTECHNICAL ASSOC		
Core Recovered	N/A	ft :	Diam. in.	Mfg. Date	ACKER		
Soil Samples	N/A	in.	Diam. No.	Inspected By:	J. Crouther		
Soil Samples	N/A	in.	Diam. No.	Classification By:	J. Crouther		

DEPTH	CORE/SAMPLE			BLOWS PER FT.	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
	NO.	SIZE	DEPTH RANGE	CORE REC'D		
10					1.5 FT. SINK IN WITH WEIGHT OF HAMMER	
20				Z		
30				4		
40				Z	DROVE "AW" ROD PROBE FROM 0.0 TO 12.0 FT. WITH 300 LB. HAMMER	
50				Z		
60				7 ³		
70				5		
80				6		
90				6		
100				6		

GENERAL REMARKS: WATER 4.3 FT. DEEP AT
1105 hrs ON 5-11-84

Site: Pine Point Harbor ME				Probe No. FP-84-14	Page <u>2</u> of <u>3</u>
DEPTH 1'-20'	CORE/SAMPLE NO.	CORE SIZE	BLOWS PER FT. DEPTH CORE RECVY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
11.0			6		SILTY SAND, fine sand 10-15% slightly to nonplastic fines, dark grey (SM) 12.0
12.0			6	END OF PROBE AT 120 FT	

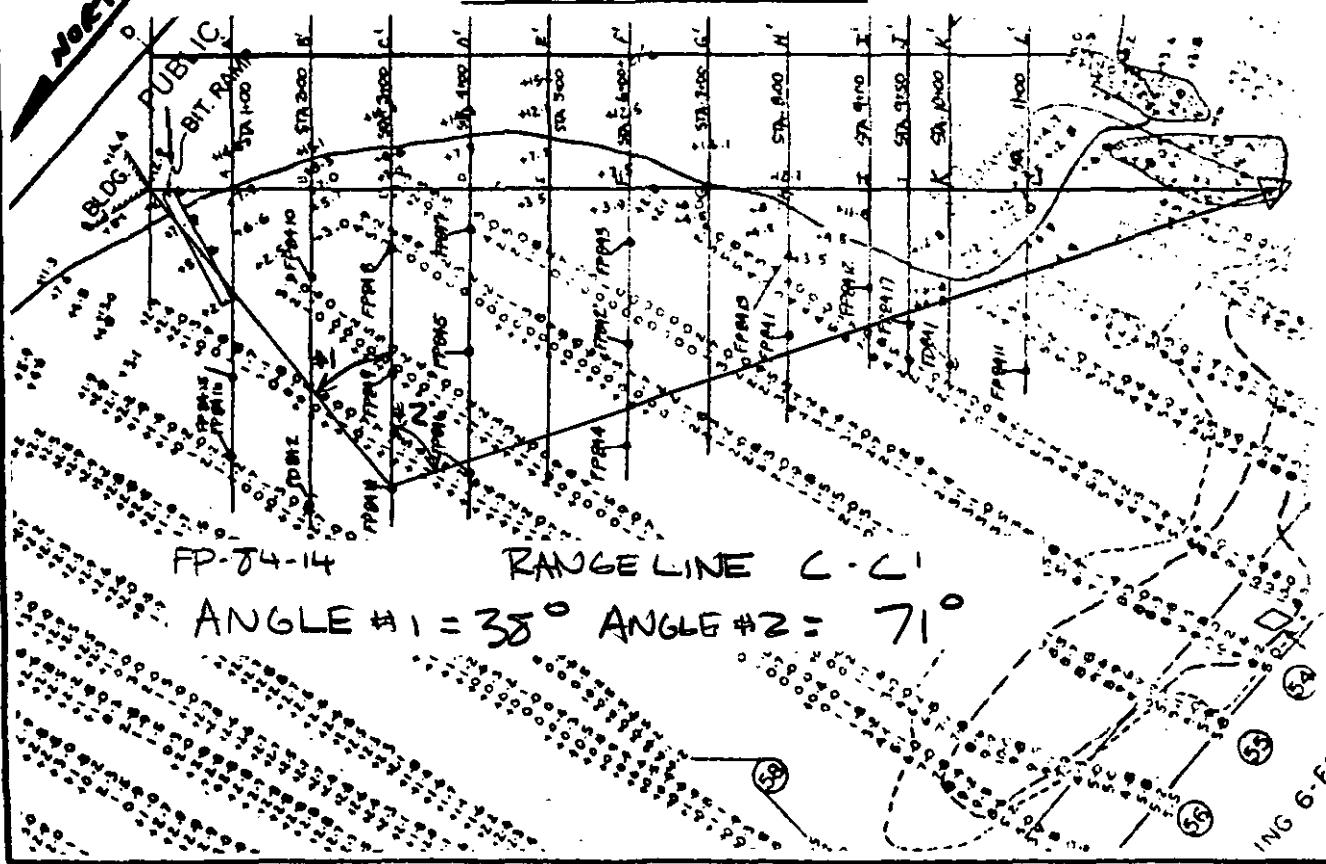
Site: PINE POINT ME

Probe No. FP-84-14

TIDAL OBSERVATIONS

Note: Depths are in feet below original ground or mudline.

Probe Location Sketch



Probe No. FP-84-14

U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

Site Pine Point Harbor ME Page 1 of 2 Pages

Probe EP-84-15 Desig. P-2 Diam. (Casing) _____

FIELD LOG OF TEST PROBE

Co-ordinates: N _____ E _____

Elevation Top	-1.0	MLW	Hammer Wt. <u>300 lbs</u>	Started <u>5-11-84</u>
Total Overburden Drilled	<u>9.0</u>	M.S.L. Feet	Hammer Drop <u>15"</u>	Completed <u>5-11-84</u>
Elevation Top of Rock	-	M.S.L.	Casing Left	Subsurface Water Data
Total Rock Drilled	N/A	Feet	Obs. Well	— Page
Elevation Bottom	-10.0	MLW	Drilled By <u>EASTERN GEOTECHNICAL ASSOC.</u>	
Total Depth	9.0	Feet	Mfg. Des. Drill <u>ACKER</u>	
Core Recovered	N/A %	No. Boxes	Inspected By: <u>J. Crouther</u>	
Core Recovered	N/A Ft:	Diam. In.	Classification By: <u>J. Crouther</u>	
Soil Samples	N/A	In. Diam. No.	Classification By:	
Soil Samples	N/A	In. Diam. No.	Classification By:	

DEPTH	CORE/SAMPLE			SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
	NO.	SIZE RANGE	DEPTH CORE RECVY		
1.0				2.75 FT. SINK IN WAT. WEIGHT OF HAMMER	
2.0					
3.0			1		
4.0			2	DOVE "AW" ROD PROBE FROM M.O.O TO 9.0 FT WITH 300 lb HAMMER	SILT SAND (IN RODS NEAR TOP) very fine sand, 10-20% slightly plastic fines, dark grey (SM)
5.0			1		trace min shells
6.0			0		
7.0				5.5 FT.	
8.0			4		
9.0			5		
				END OF PROBE AT 9.0 FT.	SAND (NTIP) fine sand, 5-10% u.p. fines grey (SM)

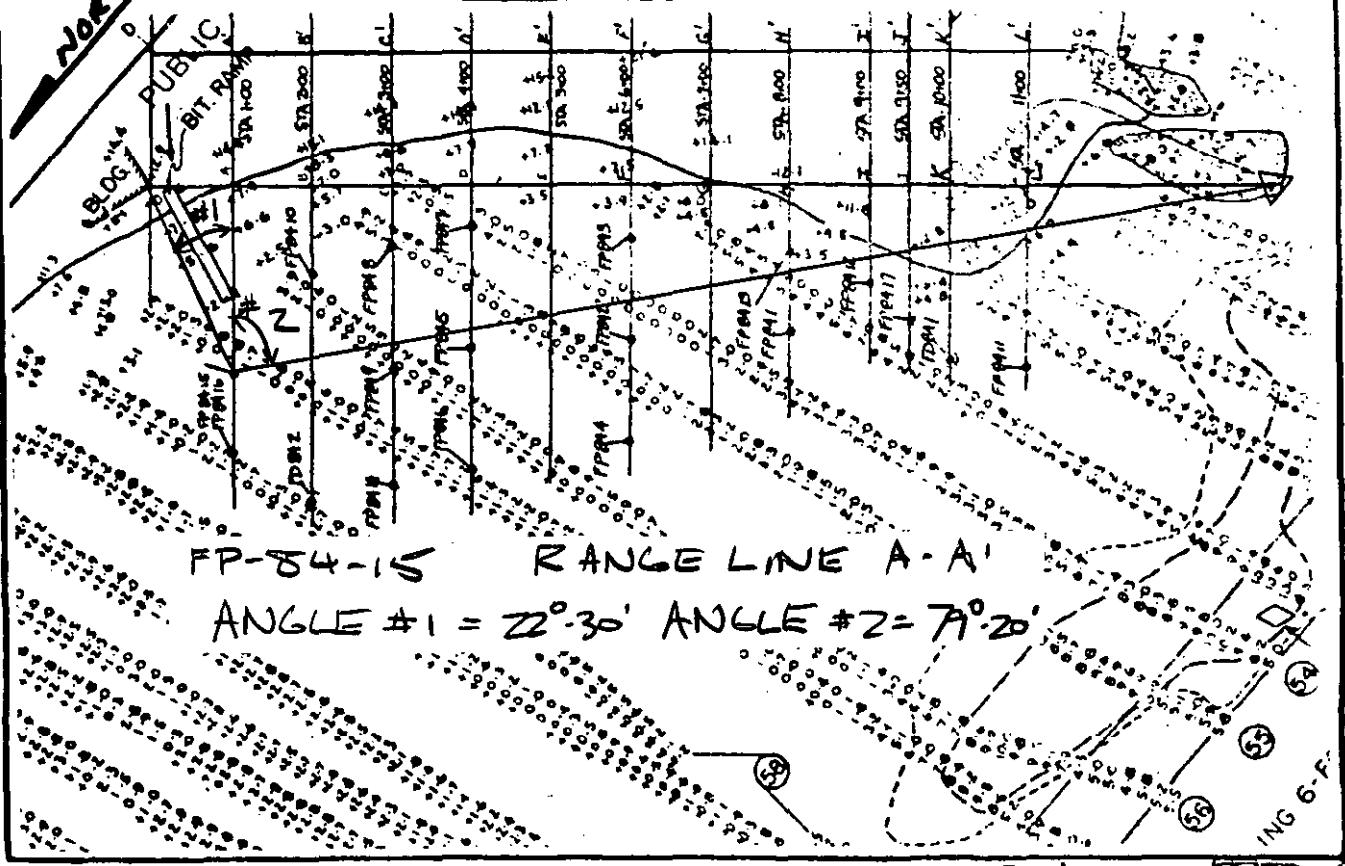
GENERAL REMARKS: WATER 6.2 FT. DEEP AT 1133 hrs ON 5-11-84

Site: PINE POINT ME
Probe No. FP-54-15

TIDAL OBSERVATIONS

Note: Depths are in feet below original ground or mudline.

Probe Location Sketch



Probe No.

U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

Site Pine Point Harbor ME Page 1 of 2 Pages

Probe FP-84-16 Desig. P-1 Diam. (Casing) _____

FIELD LOG OF TEST PROBE

Co-ordinates: N _____ E _____

Elevation Top	-0.9	MLW	Hammer Wt. 300 lbs	Started 5-11-84
Total Overburden Drilled	9	M.S.L.	Hammer Drop 18"	Completed 5-11-84
Elevation Top of Rock	—	M.S.L.	Casing Left	
Total Rock Drilled	N/A	Feet	Subsurface Water Data	Page
Elevation Bottom	-9.9	MLW	Obs. Well —	
Total Depth	9	Feet	Drilled By EASTERN GEOTECHNICAL Assoc.	
Core Recovered	N/A	%	Mfg. Dev. Drill ACKER	
Core Recovered	N/A	ft.	Inspected By: J. Crantec	
Soil Samples	N/A	In.	Classification By: J. Crantec	
Soil Samples	N/A	In. Diam.	No.	Classification By:

DEPTH	CORE/SAMPLE			BLOWS PER FT.	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
i=20	NO.	SIZE	DEPTH	CORE REC'D		
			RANGE			
1.0					Z.0 FT SINKIN WITH WEIGHT OF HAMMER	
2.0				3		
3.0				2	DROVE "AW" T2D PROBE FROM 0.0 TO 9.0 FT. WITH 300 LB. HAMMER.	SILTY SAND (IN RODS) NEAR TOP) fine, 10-20% n.p. fines, trace shells dark grey (SM)
4.0				1		
5.0				2		
6.0				2		
7.0				2		
8.0				2		
9.0				2	END OF PROBE AT 9.0 FT.	SAND (INTIP) fine, 5-10% non plastic fine, trace shells grey (SM) 9.0 FT

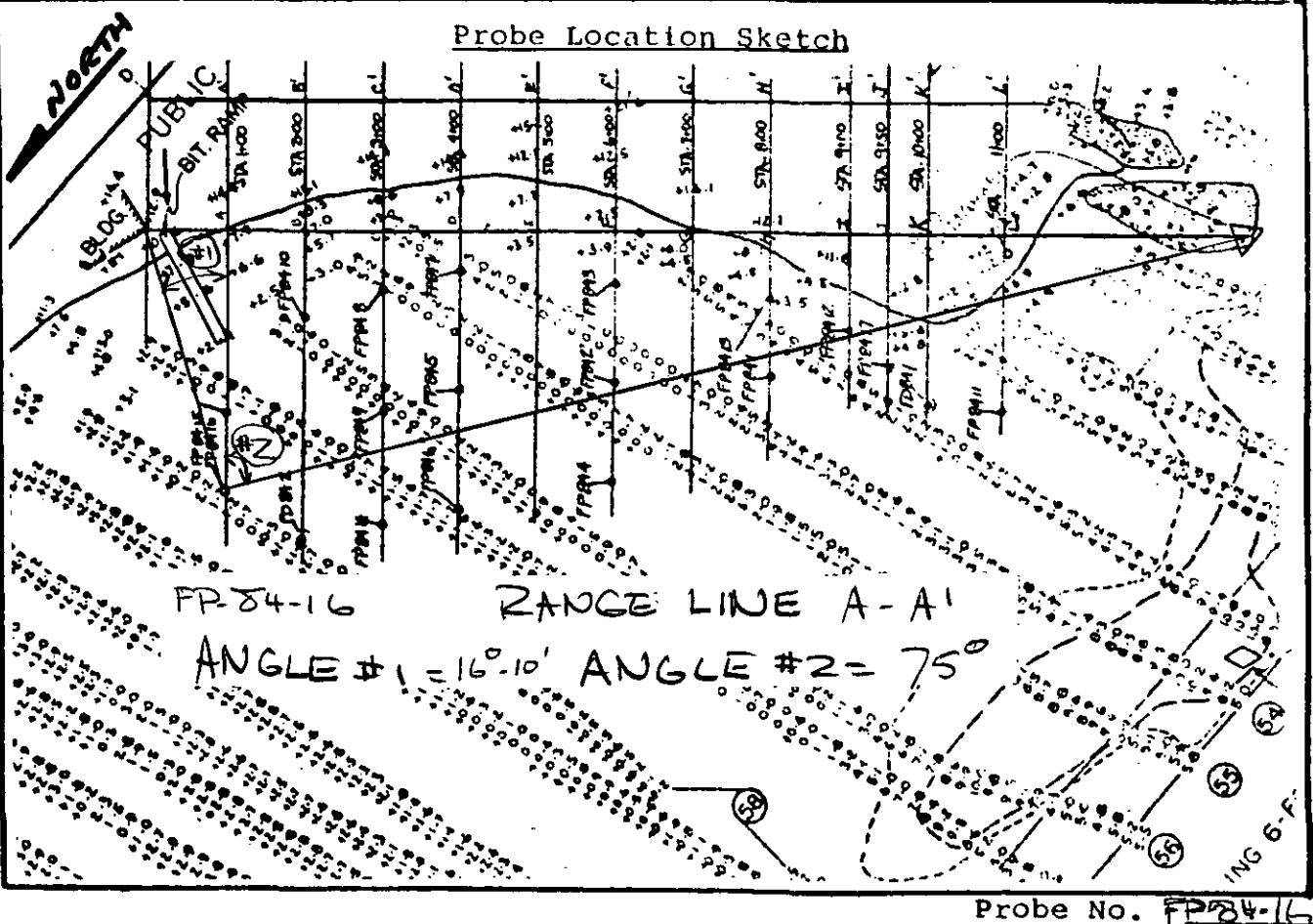
GENERAL REMARKS: WATER AT 4.75 FT. AT 1200 hrs.
ON 5-11-84

Site: PINE POINT ME

Probe No. FD-84-16

TIDAL OBSERVATIONS

Note: Depths are in feet below original ground or mudline.



U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST PROBE

Site Pine Pt. Harbor ME

Page 1 of 2 Pages

Probe FP-84-17 Desig. P-23 Diam. (Casing)

Co-ordinates: N _____ E _____

Elevation Top	-1.1	MLW	M.S.L.	Hammer Wt. 300 lbs	Started 5-11-84
Total Overburden Drilled	10.0	Foot		Hammer Drop 18"	
Elevation Top of Rock	-	M.S.L.		Casing Left -	Completed 5-11-84
Total Rock Drilled	N/A	Foot			
Elevation Bottom	-11.1	MLW			
Total Depth	10.0	Foot			
Core Recovered	N/A	%	No. Boxes		
Core Recovered	N/A	ft	Diam. in.		
Soil Samples	N/A	in.	Diam. No.		
Soil Samples	N/A	in.	Diam. No.		

DEPTH	CORE/SAMPLE		BLOWS PER FT. CORE REC'D	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
	1"-2"	NO. SIZE RANGE			
1.0				1.0FT. SINK IN WITH WEIGHT OF HAMMER.	
2.0			1		
3.0		2			
4.0		2		DROVE "AW" ROD PROBE FROM 0.0 TO 10.0 FT. WITH 300lb.	
5.0		2		HAMMER.	
6.0		10			
7.0		10			
8.0		25			
9.0		32			
10.0		Z1		END OF PROBE AT 10.0FT.	

GENERAL REMARKS: WATER 3.0 FT. DEEP AT
1245 hrs ON 5-11-84

SAND (INRODS) fine
5-10% s.p. fines, gray
brown (SP-SM)

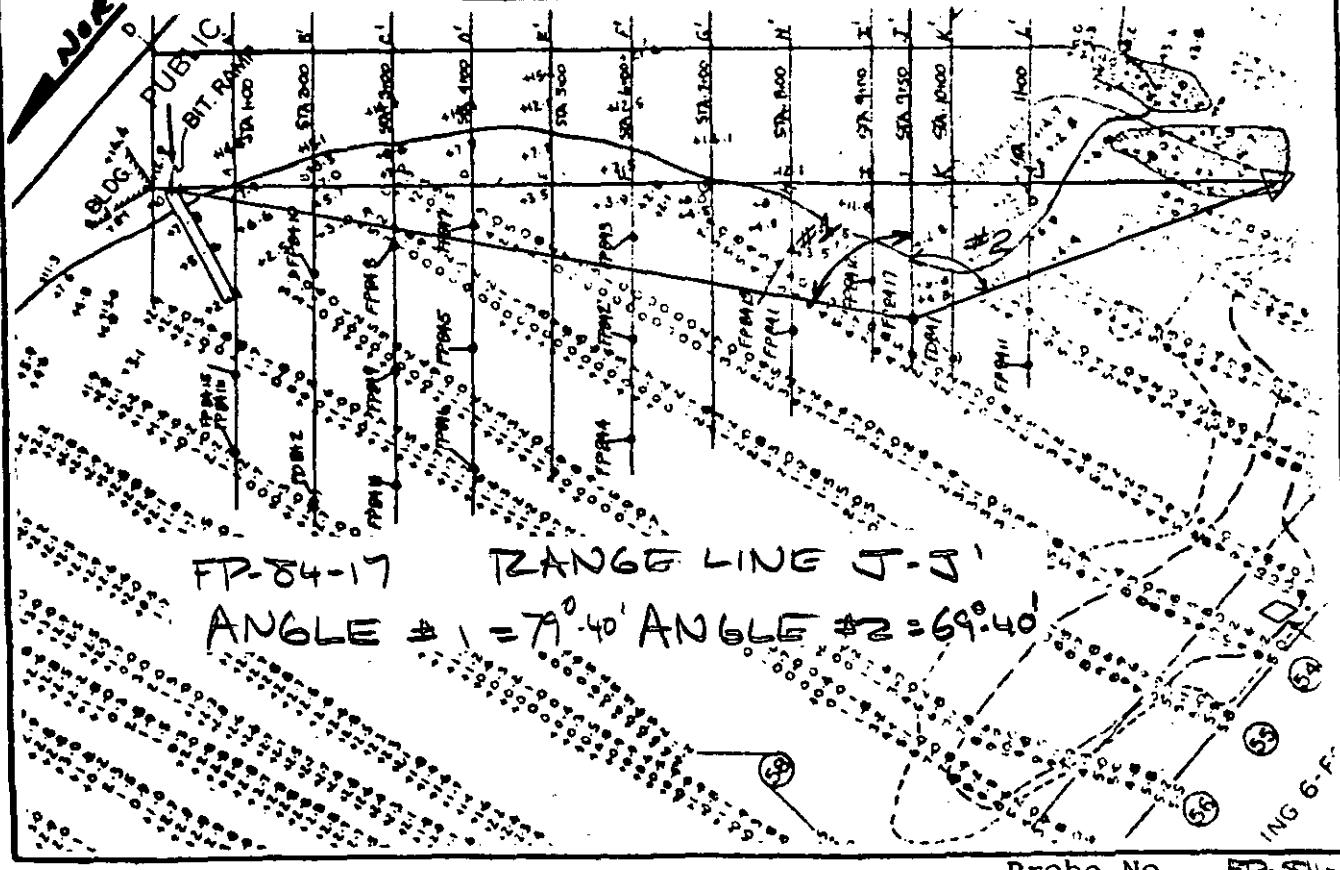
SILTY SAND (INTIP)
coarse to fine mostly fine
5-10% gravel, 10-15% sand
plastic zones, gray (SM)
100 FT. POSS. GLACIAL TILL

Site: PINE POINT ME
Probe No. FP-84-17

TIDAL OBSERVATIONS

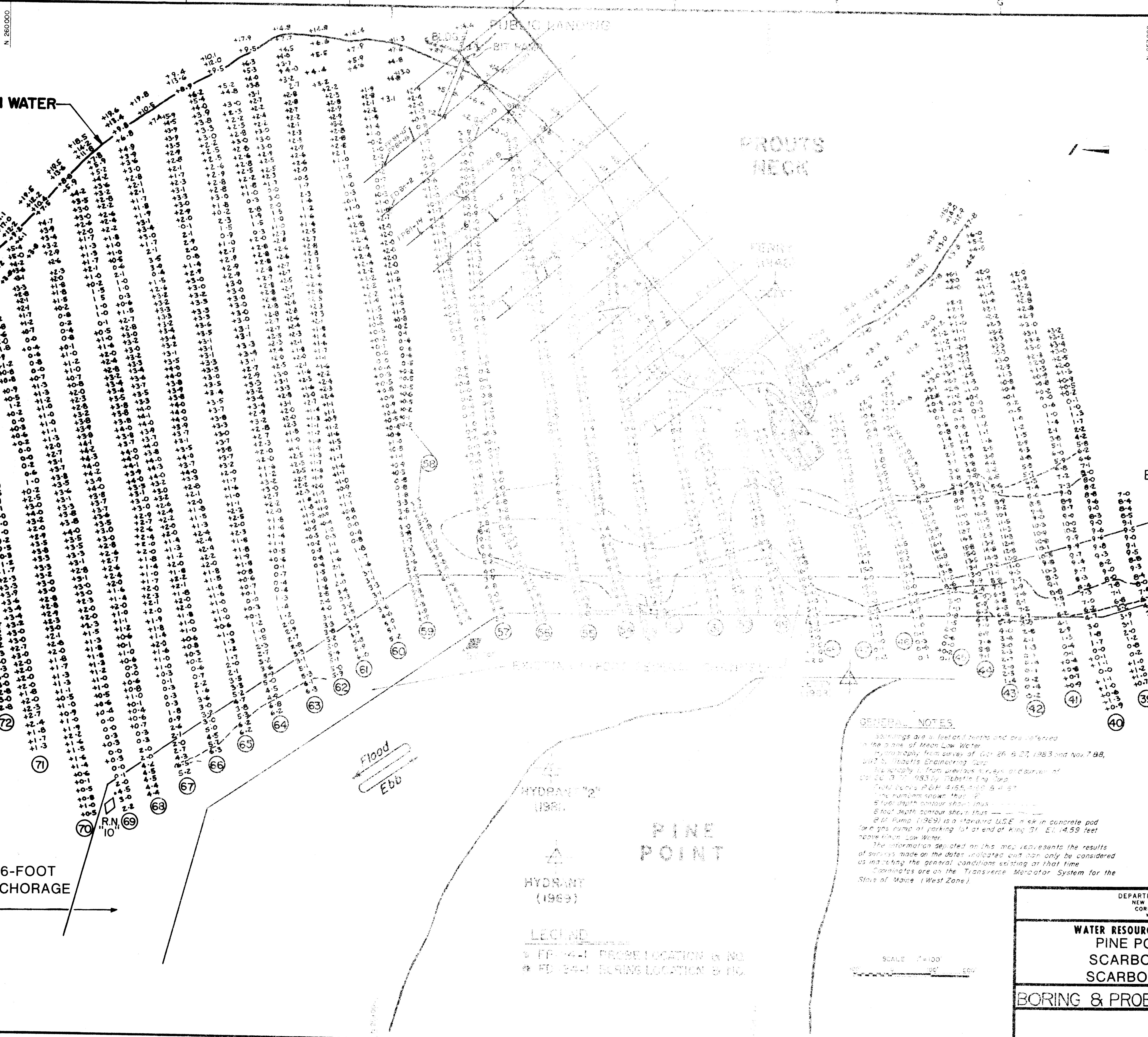
Note: Depths are in feet below original ground or mudline.

Probe Location Sketch



Probe No. FP-84-17


APPENDIX F
TIDE CHART



DEPARTMENT OF THE ARMY
NEW ENGLAND DIVISION
CORPS OF ENGINEERS
WALTHAM, MASS.

**WATER RESOURCES IMPROVEMENT STUDY
PINE POINT HARBOR
SCARBOROUGH RIVER
SCARBOROUGH, MAINE
BORING & PROBE LOCATION PLAN**

FIGURE 1



PINE POINT ME

1984 MAY 1984

BOSTON	SUN denotes sunrise & sunset	PORTLAND	
a.m.	p.m.	a.m.	p.m.
2:31 Hi 3:13	SUNDAY	2:04 Hi 2:48	
9.9 Height 6.6		9.6 Height 8.3	
8:59 Lo 9:13	6	2:04 Lo 2:48	
-0.2 Height 1.1		-0.3 Height 1.1	
4:33 Sun 6:49		4:33 Sun 6:49	
3:25 Hi 4:08	MONDAY	2:57 Hi 3:46	
9.8 Height 8.6		9.5 Height 8.3	
9:53 Lo 10:10	7	9:30 Lo 9:44	
-0.1 Height 1.1		-0.1 Height 1.2	
4:32 Sun 6:50		4:32 Sun 6:50	
4:24 Hi 5:09	TUESDAY	3:57 Hi 4:50	
9.7 Height 8.8		9.4 Height 8.5	
10:51 Lo 11:13	8	10:31 Lo 10:50	
0.0 Height 1.0		0.0 Height 1.2	
4:31 Sun 6:51	1st QUARTER	4:31 Sun 6:51	
5:27 Hi 6:09	WEDNESDAY	5:03 Hi 5:45	
9.7 Height 9.1		9.4 Height 8.8	
11:53 Lo —	9	11:35 Lo 11:58	
-0.1 Height —		0.0 Height 0.9	
4:30 Sun 6:52		4:30 Sun 6:52	
6:30 Hi 7:09	THURSDAY	6:12 Hi 6:57	
9.8 Height 9.6		9.4 Height 9.3	
12:19 Lo 12:53	10	— Lo 12:37	
0.6 Height -0.3		— Height -0.1	
4:29 Sun 6:53		4:29 Sun 6:53	
7:33 Hi 8:05	FRIDAY	7:18 Hi 7:55	
9.9 Height 10.2		9.5 Height 9.8	
1:21 Lo 1:49	11	1:06 Lo 1:36	
0.1 Height -0.5		0.3 Height -0.4	
4:27 Sun 6:54		4:27 Sun 6:54	
8:32 Hi 8:58	SATURDAY	8:21 Hi 8:50	
10.1 Height 10.8		9.7 Height 10.3	
2:21 Lo 2:44	12	2:09 Lo 2:31	
-0.5 Height -0.7		-0.3 Height -0.6	
4:26 Sun 6:55		4:26 Sun 6:55	
BOSTON	MAY	PORTLAND	

Eastern Standard Times - Add 1 hour for Daylight Savings Time.

1984 MAY 1984

BOSTON	SUN denotes sunrise & sunset	PORTLAND	
a.m.	p.m.	a.m.	p.m.
9:27 Hi 9:50	SUNDAY	9:19 Hi 9:40	
10.3 Height 11.2		9.8 Height 10.7	
3:16 Lo 3:35	13	3:08 Lo 3:24	
-1.1 Height -0.8		-0.9 Height -0.8	
4:25 Sun 6:57		4:25 Sun 6:57	
10:21 Hi 10:39	MONDAY	10:12 Hi 10:30	
10.3 Height 11.4		9.8 Height 10.8	
4:09 Lo 4:23	14	4:01 Lo 4:15	
-1.5 Height -0.8		-1.4 Height -0.8	
4:24 Sun 6:58		4:24 Sun 6:58	
11:13 Hi 11:26	TUESDAY	11:04 Hi 11:18	
10.2 Height 11.4		9.6 Height 10.8	
4:58 Lo 5:11	15	4:52 Lo 5:04	
-1.7 Height -0.6		-1.7 Height -0.7	
4:23 Sun 6:59	FULL MOON	4:23 Sun 6:59	
— Hi 12:02	WEDNESDAY	11:55 Hi —	
— Height 10.0		9.4 Height —	
5:47 Lo 5:59	16	5:41 Lo 5:51	
-1.7 Height -0.3		-1.7 Height -0.4	
4:22 Sun 7:00		4:22 Sun 7:00	
12:13 Hi 12:50	THURSDAY	12:05 Hi 12:44	
11.2 Height 9.6		10.6 Height 9.1	
6:36 Lo 6:46	17	6:30 Lo 6:39	
-1.4 Height 0.1		-1.5 Height 0.0	
4:21 Sun 7:01		4:21 Sun 7:01	
1:02 Hi 1:40	FRIDAY	12:52 Hi 1:35	
10.8 Height 9.2		10.2 Height 8.7	
7:22 Lo 7:34	18	7:19 Lo 7:27	
-1.0 Height 0.5		-1.0 Height 0.5	
4:20 Sun 7:02		4:20 Sun 7:02	
1:50 Hi 2:30	SATURDAY	1:43 Hi 2:25	
10.3 Height 8.8		9.8 Height 8.4	
8:12 Lo 8:23	19	8:11 Lo 8:16	
-0.5 Height 1.0		-0.5 Height 0.9	
4:20 Sun 7:02		4:20 Sun 7:02	
BOSTON	MAY	PORTLAND	

Eastern Standard Times - Add 1 hour for Daylight Savings Time.

No. 875
10 X 10 TO THE CENTIMETER
MADE IN U.S.A.

HEIGHT OF TIDE (FT)

MLW

0700 0800 0900 1000 1100 1200 1300 1400 1500 1600 1700 1800 1900

TIME (HRS)

NOTE : PINE POINT 9 MIN BEFORE BOSTON, SAME AS PORTLAND

